

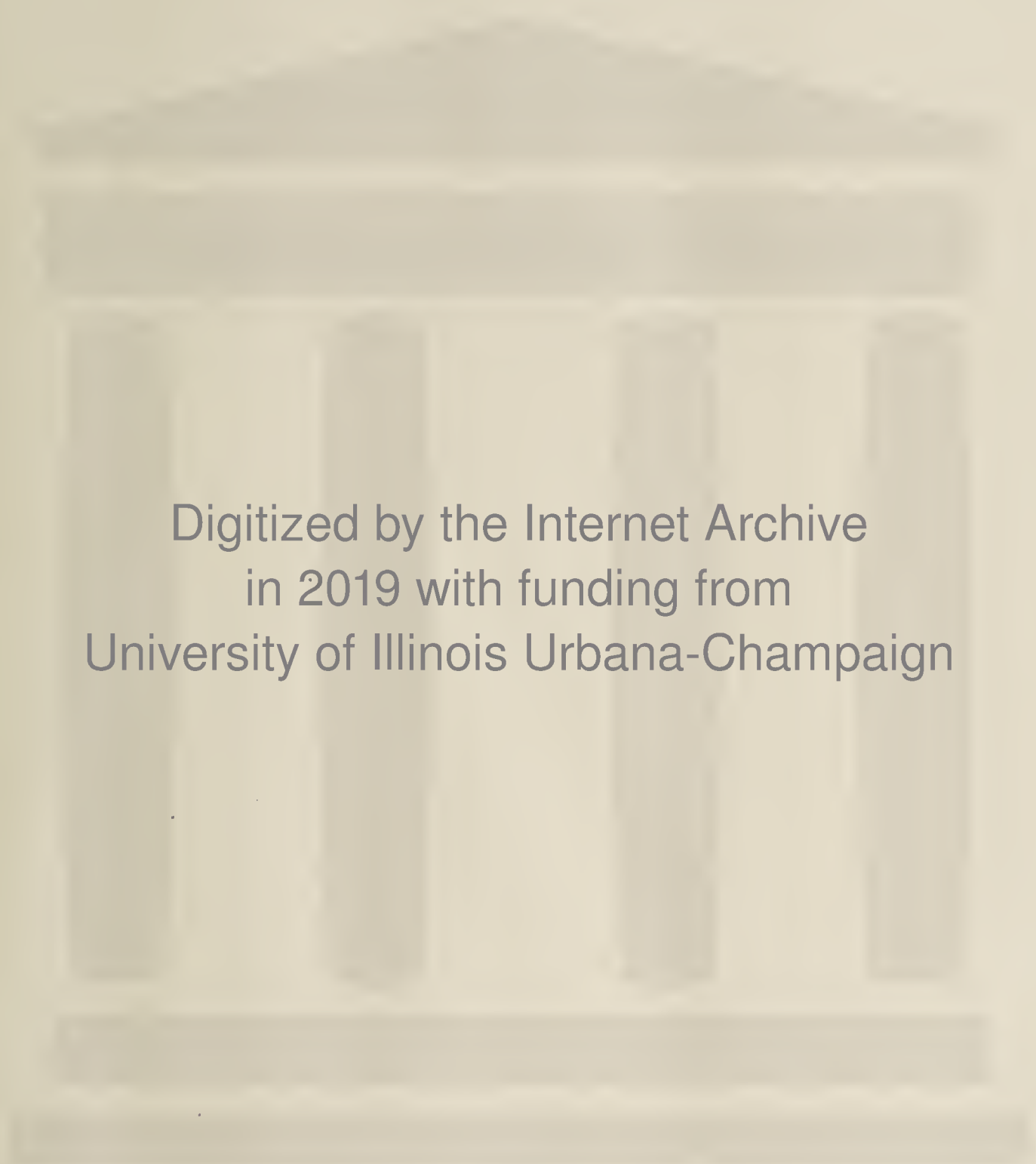
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THE AMERICAN FOOD JOURNAL



VOLUME ELEVEN
NUMBER ONE

Chicago, January, 1916

MONTHLY \$1.00 PER YEAR
TEN CENTS PER COPY

In This Number.

Annual Report of U. S. Chemist.

Food, Adulterants and the Law.

Amendments to Food and Drug Act.

Interesting Data on Oleomargarine.

Washington News Letter.

Notes from Field of Food Control.

Some Food and Drug Frauds in Kansas.

Fishing Industry of the United States.

Annual Market Reviews.

Gleanings From the World of Foods.

Food News from the East.

Apple Market Investigations.

Complete Index of Volume 10.

A monthly magazine devoted to the
interests of food control of-
ficials, food manufacturers
and wholesale grocers.

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CHICAGO, U. S. A.

BREAD BETTER *In Dr. Wiley's Opinion* THAN MEAT

Washington, Jan. 9.—Dr. Harvey W. Wiley, the pure food expert, to-day issued a warning to the public against the curtailment of bread eating should the price be advanced because of the rise in the cost of wheat. He said:

"There is a popular fallacy in favor of meat. Meat contains 60 per cent water and costs 25 cents a pound. Bread is only 40 per cent water and costs 5 cents a pound. There's more energy in a pound of bread than in a pound of meat. Hard workers need bread more than meat. If the cost of flour makes bread rise, cut down on the meat. Bread is the cheapest food known."

Eat Bread— More Bread

The best Bread
is made with

Fleischmann's Yeast

THE AMERICAN FOOD JOURNAL

There is no higher art than that which tends toward the improvement of human food.—Beecher.

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The ownership of The American Food Journal is vested solely in the officers of the company. No person, firm or corporation, either directly or indirectly connected with the business it represents, has any share in its ownership or voice in shaping its policy which has in view at all times the best interests of the field it serves. It aims to discuss all subjects fairly, and to furnish its readers information concerning the progress and development of the food industries. It will answer any questions concerning the business to the best of its ability, and it asks its readers in all parts of the world to aid it with inquiries and suggestions, to which it will give prompt and earnest consideration.

Vol. XI.

JANUARY, 1916.

Number 1.

SALUTATION



NO doubt, we have all, some time in our lives, experienced something akin to ennui against compliance with a constantly recurring custom. We know well that custom, when placed in the shrine of reverence, may very easily and very naturally become irksome. And it is this thought we have in mind when we bow to the long established precedent and utter a word of salutation as we stand in the portals of the new year.

However, here is a time when custom seems to have risen above the humdrum, sordid plane of human motive.

There is every reason why we should, there is not a single reason why we should not grasp the hand of brother man upon this most portentous and ominous day of the year.

Perhaps there should be more such days, so that human hearts might expand, so that human souls might wing their way to loftier ideals, to nobler purposes.

There is a more especial reason why THE AMERICAN FOOD JOURNAL should at this time speak to its friends and readers. For the event means to us not only the recurrence of a welcome day, but, moreover, its significance is increased in our eyes by the fact that this is the tenth anniversary of our publication.

Though we must claim sincerity, perseverance, unswerving determination as the cornerstone upon which our success was laid, as the triple legend marking the banner which led us on to achievement, yet it was not without the support of loyal friends, of rugged pioneers in a field then unexplored and unknown, that we were enabled to accomplish this success.

So that it is with sentiments of expansive and deep-rooted brotherhood that we come forth at this moment and bow to the honorable tradition of well-wishing.

During the year that has passed many have taken their way into the valley of shades and sorrows.

What may be inscribed upon the tablets of fate for the incoming cycle it is not within our province to know or to control.

Helpless atoms, hurled about in the winds of Destiny, our lot it is to live in hope and in faith till our haven is sighted.

We may only wish and pray that the fates will be kind to our friends.

That a full and bountiful measure of success be gathered in by all our friends and readers is the heartfelt wish of THE AMERICAN FOOD JOURNAL, that pangs and griefs be spared them and that the joys and fruits of a well spent life be theirs.

FOOD STANDARDS IN RETROSPECT.

In the light of events which have transpired in the food world during the past few months it is proper at this time to look back for a few moments in retrospect over that particular field of activity.

At the inception of the movement for state supervision and regulation of the sale of food stuffs the necessity became apparent for state food standards by which the fitness and purity of edible products might be established and which might serve as a basis for prosecution, should analysis, in a given case, show a violation of these standards on the part of the manufacturer.

There were instances, as in the case of milk, when such standards were described and incorporated in the law itself. Naturally, these standards carried the weight and authority of the law. In other instances, however, the responsibility of determining and interpreting the food law as affecting the quality of certain foods devolved solely upon the Commissioner who "made the punishment fit the pun," according to his light, to the scope of his authority and sometimes, possibly, slightly in excess of the powers delegated to him.

Where the standards were incorporated in the law itself it is known that no great trouble was experienced in any particular state in the administration of the law. It was when interstate commerce was evolved that the tangle of conflicting state laws confronted the food authorities and manufacturers. Goods manufactured in one state and shipped into another presented a complex and, sometimes, baffling angle to the situation.

For that reason it became extremely desirable not only that the various states adopt uniform rulings, but, moreover, that wherever possible the states agree upon uniform standards for food stuffs.

The two objectives just named were the main cause of being, the principal life object of the National Association of State Dairy and Food Departments.

And the Association recognized this fact in the constitution and by-laws and in every session since its formation in 1897. A committee to consider the unification of state laws and rulings was early appointed and in a paper upon this topic in 1900 E. N. Eaton of Illinois, said:

"It is scarcely necessary to urge the importance of reform along this line. You well know the difficulty and annoyance for the manufacturer to comply with the various and dissimilar statutes: the labor of mixing one grade of goods for one state, and one for another; the trouble of procuring a separate label for each state on almost every variety of goods sold; the difficulty of keeping posted on the various food laws, and the multitudinous rulings thereon; the intellectual acrobatic task of discovering the changes in food rulings as they are promulgated; the expense of employing legal talent to interpret laws and rulings; and to call in and replace illegal goods; the loss of money, trade, and even reputation that might result from a mistake, misjudgment, or an accident. Surely the manufacturer must bear a full share of the burden of securing pure food without all this unnecessary handicap to business."

This was the situation as regards uniform rules and standards for food stuffs in the early nineties.

At this time the United States government, through

the agency of the Department of Agriculture, came in contact with food legislation only in matters pertaining to or affected by imports and exports.

However, for certain reasons born of the occasion, certain people, in no wise concerned in food standards, endeavored to fix, qualify or determine these through the medium of the Association of Official Agricultural Chemists. The standards to be binding upon or to serve as guidance for the food commission of the various states, representing an entirely different branch of the service, the result was invariably one of indignation over such high-handed procedure. It may easily be understood that the indignant ones were among the food commissioners, food chemists and officials of the food departments of the various individual states. It is worthy of notice that the committee charged with the work of creating and defining standards, while grasping the authority, had failed utterly to produce any standards, or for that matter to show any results of their labors.

It was due to this apparent inactivity of the committee just mentioned that Dr. E. N. Eaton of Illinois was appointed chairman of the Committee by the Association of State Dairy and Food Departments, in convention at Buffalo, N. Y., in 1901, the object in view being to stimulate co-operation with this committee and accelerate the work, and make the result of the work when completed useful to the State Food Chemists.

Although the late John Hamilton of Pennsylvania, Food Commissioner of Pennsylvania, in the convention of Official Agriculture Chemists, spoke eloquently in advocacy of co-operation with this committee, it was courteously given the cold shoulder.

The matter, however, was not allowed to die by starvation. Dr. Eaton, before the Portland Convention in 1902, presented papers urging the adoption of uniform standards created by the Association of State Food Departments, with such telling effect that the Association of Official Agricultural Chemists felt impelled to import its heaviest guns for an assault upon the food standards of the states at the St. Paul convention. It was at this time that the Bureau of Chemistry and its Standards Committee succeeded in supplanting Dr. Eaton as chairman of the Standard Committee of the Association of State Dairy and Food Departments by the late Dr. M. A. Scoville of Kentucky, who was also a member of the Food Standard Committee of the Association of Official Agricultural Chemists.

However, the ghost of state food standards would not down and authority was given at the same convention for the publication of preliminary standards prepared by the Standard Committee of the State Dairy and Food Association. At the St. Louis Convention, one year later, Dr. Eaton was again made chairman of the Standard Committee of the Association of State Dairy and Food Departments, and the following year, at Portland, an enlarged Standards Committee, consisting of both Commissioners and Chemists, was appointed and a mid-summer meeting provided for, to be held at Chicago.

A resolution passed at this mid-year meeting and forwarded to the Secretary of Agriculture asked for representation on the Food Standards Committee. This was granted with the provision that the Department of Chemistry be permitted to name one repre-

sentative. This member was taken from the Agricultural Experiment Station Branch. Shortly after this the U. S. food law became an actuality, although no standards were established for use in the enforcement of the law. The Association of State Dairy and Food Departments received the new delegates with open arms. However, the prestige of the Association and the swaying power of its voice in the fixation of food standards grew stronger instead of lessening, aided, no doubt, by the stand of THE AMERICAN FOOD JOURNAL. As yet, however, the actual representations of the State Dairy and Food Departments, though numerically greater, was in fact still almost nil, owing to the influence of the Bureau of Chemistry over the appointing power.

Some schedules of food standards were at last formulated, but because of the fact that such standards as had been formulated up to that time were not in the interest of State Food Departments and because they were in many instances impractical standards, THE AMERICAN FOOD JOURNAL continued to attack their legality, their influence and their authority, with the result that Congress withdrew all authority it had given the Standards Committee of the Association of Official Agricultural Chemists; in fact, the best parliamentarians in Congress questioned the right of anybody to fix standards, even for the enforcement of the National Food Law. The Standards Committee, although continued on paper, was thus allowed to hibernate for eight years or more. However, there is today just as vital a need for standards in state food work as there was in 1905 and the necessity for uniform standards in the various states is likewise as urgent and pressing, and it is not surprising to note the Association of American Dairy Food and Drug Officials again urging the promulgation of uniform standards. Instead of the "United States Food Pharmacopœia" of Dr. Eaton in 1905. We have these suggestions for these *Foodcopœia* in 1915 and instead of Food vs. National Standards of a decade ago we have the advocacy of state and national standards of today.

It should be pointed out at this time that it is no more than common justice that any board whose business it is to pass upon the fitness or purity of products intended for human consumption should have among its members a fair representation of food manufacturers.

Not only should this be done because of the element of justice involved, but, moreover, for the very evident purpose of increased efficiency. These representatives of the manufacturing interests should be given full voting voice in all matters brought up before the board for consideration.

It would be a pity to have standards promulgated today meet the same criticism of a decade ago in the prominent representation of an organization of no official connection with the food control work. It would also be a pity to try to fix standards without proper representation of the really interested parties, the manufacturers. The time must come when these standards must go to legislative bodies for authority, and when they do so it must be with clean hands and without the suggestion with proper representatives and credentials of extraneous influence or one sidedness for any purpose.

POSSIBLE REFORMS IN BUTTER-MAKING.

As has been pointed out in various previous issues of THE AMERICAN FOOD JOURNAL, the clouds are looming black and ominous in the butter world. No better or stronger evidence need be advanced in support of this assertion than to point to the editorial and news columns of the Creamery Press throughout the past two or three months. Without wishing to resort to levity, it might be proper to compare the butter people at the present time to a flock of frightened hens scurrying towards the coop at the approach of a wind-heralded storm.

It must be evident to all serious observers of conditions, not only in the butter field but in the food world at large, that the pulse of the creamery people has quickened in response to an extremely positive condition.

In other words, the butter industry of the country is facing not a newspaper sensation but an actual condition.

At this time, it would seem a useless waste of effort to repeat, to point out anew facts and warnings which have already been printed in this publication. But, it is entirely in keeping with consistency and good editorial policy to take up the thread where it was last left off. The fact is that the problems confronting the butter industry of this country, the betterment of conditions now prevailing, the improvement of conditions which obtain in the manufacture and distribution of this product, are so complex and many-sided that we would not presume to treat the entire matter in any single issue of the paper. As was stated in the November issue of THE AMERICAN FOOD JOURNAL, the National Dairy Council, at a meeting held in Chicago, voted to appropriate the sum of \$600,000.00 to be used in publicity for the exploitation of the butter industry in the United States.

The question now arises will the National Dairy Council attempt at the present time to expend this money without first securing a national law which will put milk products on a uniform and standardized basis?

Various states have for some time past and are at the present time attempting to legislate concerning milk products, but the history of their efforts shows the futility of such matters being worked out by the individual states.

Iowa has a law requiring the pasteurization of skimmed milk before this milk can be returned to the farm from the creamery for the feeding of hogs, but has no law for the pasteurization of milk to be used in the manufacture of butter.

Michigan has recently established a state brand butter law.

Oregon has had such a law for some time.

Wisconsin will put into effect January 1st, 1916, a license law regulating creameries and cheese factories.

Oklahoma has made an attempt to limit creameries to the use of cream from tuberculin tested cows.

Illinois is discussing enforced pasteurization, likewise the enforced pasteurization of cream to be used in all creameries is under discussion in other states.

The fact that these laws have been placed on the statute books and are under discussion is ample evidence of the need of regulatory legislation but this should be uniform throughout all the states, as any one state, in passing such a law legislates against its own product unless the other states have similar laws.

The National Dairy Union is an organization whose admitted purpose is to look after legislation affecting dairy interests. They have, as they admit, a representative in Washington during the present session of Congress watching and protecting the dairy interests.

May we ask the National Dairy Union if it would favor and support a federal bill for government inspection of creameries, and if it would favor and support a federal bill for pasteurization, if it would favor a bill requiring butter to be labeled with the words "Artificially Colored" when the product is so colored, if it would favor a label which would show the fact if the butter fat in butter falls below a lawful standard, which lawful standard would be established by the Federal Government, if it would favor the repeal of the present law with respect to adulterated butter which is based on the moisture content, if it would favor a bill compelling the label to bear the words "Watered Butter" when the product has been so manipulated that additional water is incorporated therein.

Would you favor the statement "Sterilized and Passed" or "Passed for Sterilization" on the label of butter which has been pasteurized?

The Pure Food Laws of the country favor publicity through the label, and favor passing to the consumer information he is entitled to know concerning the goods he buys. This information has not been given him on his butter and milk products. The commercial milk supply of our cities, however, has taken a great advance when the dairyman, seeing that the public must be taken into his confidence, began some time ago to pasteurize and so label his product.

The B. A. I., while they condemn many carcasses produced from animals which have up to the time of death been furnishing the public with milk and butter-fat, also pass some of these carcasses that have been slightly affected by disease, provided the meats are first sterilized, and the products produced from these carcasses must be marked "Passed for Sterilization." Since the products produced from carcasses of this sort must be so marked, why should not the butter produced from the same animal, or like animal, be marked in a similar manner? In other words, since the Federal Government is on record that these meats may be safely consumed, provided they have first been submitted to the proper temperature and properly cooked, should it not also say that the milk or butter-fat produced from the same animal or similar animal be so submitted to heat and so marked before being offered for sale?

Therefore, we ask, will the National Dairy Union be willing to take the public into its confidence, and support a bill of this nature?

We believe that affirmative action on the part of the National Dairy Union to each and every one of the foregoing questions, would act as a powerful influence made up of so many units, to counteract a great deal of harm which has been done the American butter industry in the past not only at home, but, as the butter people themselves well know, in Australia, England, and other countries.

The time has surely come when decisive remedial action must be taken if the butter industry is to be restored to a position of national respectability.

As proof that a state cannot enforce a sanitary law on the butter manufactured therein, witness the California statute that takes effect October 1st, 1916, requiring that all dairy products, except cheese, shall be

either pasteurized or shall be produced from cows that pass the tuberculin test. The Chamber of Commerce of San Francisco is working for the repeal of this law, claiming that it will work a hardship on the creamerymen of the state, and will place California dairy products at a decided disadvantage with the products of the other states with which these products are in competition, and where these expensive sanitary measures are not required.

PASSING OF REFEREE BOARD.

Without the eclat which attended its birth a number of years ago the Referee Board of Consulting Scientific Experts came to the end of its eminently useful existence recently, when the members of that distinguished body tendered their individual resignations and disbanded.

He who has watched the trend of food control and legislation with any degree of interest must be given to wonder at this time whether the ultimate outcome of this unheralded event shall be for the better.

Certainly it must be admitted by all that the Remsen Board served a most valuable purpose.

The effect of its decisions is felt today and shall continue to exert a wholesome influence for many years to come.

Before the creation of the Board, matters of great moment were passed upon by departmental heads, without the desired degree of knowledge and efficiency, sometimes even with something akin to snap or arbitrary judgment.

The creation of the Referee Board of Consulting Scientific Experts, under President Roosevelt, came as a boon to those who felt the necessity for a broader principle in the administration of food control and legislation. Their point proved to be well taken, inasmuch as the Board was composed of men ranking among the highest authorities in the United States, on such subjects as might be submitted to them for advisory action.

It was the duty of the Remsen Board to investigate such technical questions as might be submitted to them in the administration of the food and drugs act. The findings of the body, although advisory in nature, were, because of the dignity of their source, invariably respected by the Government.

The personnel of the Board as originally composed, included such eminent food authorities as: Ira Remsen, who served as chairman; Russell H. Chittenden; John H. Long, Christian A. Herter, Alonzo E. Taylor.

THE AMERICAN FOOD JOURNAL, throughout the career of the Referee Board, had every opportunity to estimate the sterling qualities and the far-reaching influence for good of this institution.

We have been glad in equal measure to see and to note the good done through the direct agency of this body.

And now that the parting of the ways has come, now that the Remsen Board is no more and that its deeds alone must remain as its monument, we, who have journeyed along on the same highway, wish to offer the Board as a whole, and each separate member as an individual, our sincere and heartfelt gratitude for the unselfish devotion, the brilliant services, of which not only the food world, but the nation at large, was the recipient.

Annual Report of the Chemist to the Secretary of Agriculture

By DR. CARL L. ALSBERG
Chief of Bureau of Chemistry.

NEW investigations in connection with the application of chemistry to agriculture and the development of a systematic plan of inspection in connection with the enforcement of the Federal food and drugs act increased very largely the volume of work done by the Bureau of Chemistry during the fiscal year.

The research work, which has heretofore been confined largely to problems arising in connection with law enforcement, was extended to include work designed to prevent spoilage and waste and to increase production.

The experience of the bureau in the administration of the Federal food and drugs act shows that violations of its provisions are quite as frequently the result of ignorance of proper methods of production as of willful intent. The effort which has been made to improve old and devise new methods of production has proved to be an important factor in securing compliance with the law. The results obtained have been communicated to manufacturers and producers through co-operative experiments and publications.

The research work has been divided so as to segregate investigations in reference to food adulteration from investigations of new methods of production and new methods of utilizing products of the soil and sea. In both, there has been increased activity, and it is contemplated that in the near future research work in agricultural chemistry, which in recent years has been overshadowed by the demands of regulatory work, will take an equally important place in the duties of the bureau.

RESEARCH.

FLORA OF FOODSTUFFS.—A laboratory of microbiology was established for the purpose of further developing work upon the decomposition and fermentation of food products. In this laboratory a comparative study was undertaken of the groups of species of molds, their natural or usual habits, and the changes induced by them in foodstuffs. With this was combined a study of related forms. The results of the study of the *Penicillium luteum purpurogenum* group have been published. A study of corn silage and corn meal was begun. This work supplements work previously completed and published in Department Bulletin No. 215, "Composition of Corn (Maize) Meal Manufactured by Different Processes and the Influence of Composition on the Keeping Qualities."

PLANT CHEMISTRY.—To form a basis for practical nutrition investigations the composition of vegetable proteins and the forms in which nitrogen occurs in plants were studied. The prussic-acid content of various forage and medicinal plants was determined by an improved method which has been published. Among other plant chemical problems, the properties of saponin and saponin-bearing plants were investigated, and special attention was given to medicinal plants containing emodin for the purpose of improving analytical methods. A new volatile oil has been isolated from the flowers of the cotton plant and examinations have been made of the glucoside found in its leaves. The work done by the bureau in connection with this plant was for the purpose of assisting the Bureau of Entomology in its boll-weevil investigations.

Analyses were made of the different varieties of American forage grasses, and a report on their composition was made to the Bureau of Plant Industry for use in the preparation of the bulletin, "Native Pasture Grasses of the United States."

Investigations of the bureau in connection with the production, botanical composition, and volatile-oil strength of American wild mustard seed and the hydrogen number of the essential oils of sassafras, anise, fennel, clove, and pimenta have been published.

VEGETABLES AND FRUITS.—Experiments in the drying of potatoes on a commercial scale were begun during the year. Pre-

liminary experiments were made in methods of manufacturing potato starch, glucose, and dextrin and in practical methods of ensiling potatoes. The propagation of desirable lactic-acid bacteria for inoculation of ensilage was commenced.

Some of the results of the experiments and investigations in connection with the utilization of surplus fruit were published in Department Bulletin 241, "Studies of Fruit Juices," and in a Yearbook article on "Apple Sirup and Concentrated Cider."

Studies were continued in California on the ripening of oranges. A tentative standard for determining maturity, based upon the ratio of acids to solids, proposed by the bureau, was generally adopted by the orange growers.

Attention was given to the development of methods of



DR. CARL L. ALSBERG.

manufacturing citric acid, lemon oil, orange juice, orange vinegar, and other by-products of citrus fruits.

In co-operation with the Bureau of Plant Industry the composition of oranges and lemons from selected trees was determined, with the object of making selections in propagation experiments.

Investigations of the mottled-leaf disease of citrus trees, in co-operation with that bureau, demonstrated that such trees, in addition to lime, require considerable organic matter, which may be best supplied through green manuring.

Experiments in relation to the absorption by crop plants of boron applied to the soil through manure treated with borax to destroy the larvæ of the housefly were completed.

The results of these investigations are in the course of preparation for publication.

SHELLFISH AND FISH.—A new method was devised for the bacteriological examination of shellfish. In co-operation with food officials of interior states, investigations and experiments were conducted regarding the bacteriology of shucked oysters. It was discovered that a yeast was the probable cause of the reddening which affected thousands of gallons of oysters during the past season. A method was devised for determining the adulteration of scallops with water. In co-operation with the Bureau of Fisheries, investigations were commenced in regard to the freezer storage of fish treated in various commercial ways. Complete analyses of many fish were made. Continuance of the sardine investigations resulted in a further improvement in the quantity of the pack. Methods for utilizing waste in the sardine industry were recommended. In co-operation with the Bureau of Animal Industry, the feeding value of fish meal was determined.

POULTRY AND EGGS.—Nutrition investigations were commenced to determine the best methods of feeding poultry, after receipt by the packer, for increase in weight and in quality. Studies upon the breakage of eggs in transit were the basis of definite recommendations to the industry on bracing eggs in cases, bracing cases in cars, and bracing, buffing, and shifting cars in transit. The adoption of these recommendations has largely decreased damage in transit. Department Bulletin 51, "A Bacteriological and Chemical Study of Commercial Eggs in the Producing Districts of the Central West," was published. Demonstration work in the transportation, storage, and general handling of dressed poultry and eggs was extended to new territory in Oklahoma, Kansas, and Indiana. A partial description of this work was published in a Yearbook article, "The Egg and Poultry Demonstration Car Work in Reducing Our \$50,000,000 Waste in Eggs."

INSECTICIDES AND FUNGICIDES.—Several new lead arsenates and lead-chlorarsenates were prepared and their properties studied. The cause of injury to foliage by di-lead-arsenate—of which several thousand tons are used annually for spraying purposes—was found to be due, in many cases, to its decomposition by salts that occur naturally in the waters which are used for its application. A lead arsenate which is stable under these conditions was prepared. This is now being tested by the Bureau of Entomology to determine its efficiency for spraying purposes.

In co-operation with the Federal Horticultural Board, a method was devised of fumigating cotton bales with hydrocyanic acid gas, in order to guard against the introduction into this country of the pink bollworm through the importation of Egyptian cotton.

In co-operation with the Bureau of Entomology, it was found that hellebore is a practical and effective larvicide for preventing the development of the housefly in manure without affecting its fertilizing value. A summary of this work, with similar work of the preceding year, was published in Department Bulletins 118 and 245.

SALT.—A practical method was devised, and is now in use, to remove barium chlorid from brines in the manufacture of salt.

PHARMACOLOGICAL INVESTIGATIONS.—Investigations upon the pharmacology of the organic acids were continued, and some of the data upon citric, tartaric, and oxalic acids were published. A thorough study of the oil of chenopodium was completed and published. This oil, advocated in hookworm disease, was found to be quite toxic. Much attention was paid to the pharmacology of water-soluble and fat-soluble dyes used in foods.

SIRUP—SUGARS.—Important progress was made in investigations for the improvement of the methods of manufacture of cane sirup in order to obtain a uniformly bright sirup that will not ferment. A similar investigation for the improvement of sorghum sirup was commenced. Investigations to improve the methods of manufacture of candy, jams, preserves, jellies, and marmalades were continued. Improved methods were devised for the preparation of a number of sugars. A method of preparing raffinose has been published.

The mutarotation of the sugars was under investigation and the rotatory power of a series of sugars and sugar derivatives was accurately determined. Some of these investigations, as well as others upon the action of enzymes upon sugars, have been published. The following new compounds were prepared and made the subject of publications: The second, third, and fourth pentacetates of galactose, the alpha tetracetate of xylose, the alpha pentacetate of mannose, and the alpha and beta pentacetates of fructose.

DUST EXPLOSIONS.—Large property losses occur annually from dust explosions in the thrashing and milling of grain. It is reported that during the year 1914 more than \$1,000,000 worth of property was destroyed in thrasher explosions in the states of Washington, Idaho, and Oregon. In co-operation with the Bureau of Mines and the Office of Public Roads and Rural Engineering, these explosions, as well as mill and elevator explosions, were investigated and means were devised which it is believed will render these accidents less frequent. Incidentally, observations were made for the Bureau of Mines upon the explosiveness of dusts.

LEATHER AND TANNING.—Methods for the determination of sugar in leather and for the detection of oak in tanning extracts and leathers were published. Much work was done to devise methods to determine the durability of leathers. Studies were made and published on the purification and disposal of tannery wastes.

CEREALS.—Microchemical, chemical, and baking investigations were commenced to devise methods for the examination of the various grades of flour. Experiments upon flour substitutes and upon the methods of wrapping bread were also undertaken, and some of the results have been published. Owing to climatic conditions, the rye crop contained an unusual amount of ergot. Rye products were therefore studied with a view to devising better methods for the detection of ergot in them.

ANALYTICAL METHODS.—Methods for the estimation of caffeine and antipyrin in admixtures, the estimation of antipyrin, the estimation of phenacetin and salol in admixture, and the electrolytic separation and determination of zinc, copper, and iron in the presence of arsenic, and studies of the ash and acidity of vanilla extracts have been published.

Studies were made of the determination of lead in baking powder, of the Kjeldahl method of determining nitrogen, of the determination of arsenic and tin in canned goods, of the determination of moisture in foods, of mercury in surgical dressings, of pepsin in chewing gum, of ethyl nitrite in sweet spirits of niter, of lime in butter made from limed cream, and of citric acid in the presence of other organic acids. New methods for the analysis of vinegars and of aromatic spirits of ammonia were under consideration.

REGULATION.

DOMESTIC FOODS AND DRUGS.—The reorganization of the bureau's field service into three districts, outlined in the bureau's report for the year ended June 30, 1914, resulted in more efficient inspection of foods and drugs moving in interstate and foreign commerce and in more systematic action in the administration of the Federal food and drugs act.

Special attention was given during the year to interstate traffic in adulterated pepper. Pepper shells have been imported in large quantities and utilized as an adulterant for ground whole pepper. The distribution of the shells was investigated, factories were inspected, and many samples of the raw and the finished product were analyzed. Through the collection and analysis of products of particular manufacturers over a considerable period of time it appeared in many cases that the adulteration was deliberate and extensive and not an accident or due to a single instance of carelessness. Seizures of a very considerable number of interstate deliveries brought forth assurances that mixtures of pepper and pepper shells will hereafter not be sold merely as pepper, but if sold at all will be truthfully described on the label.

Adulteration of oats by the deliberate addition of barley, weed seeds, or water also was investigated. A large number of consignments were seized, with the result that the practice has been largely discontinued.

An extensive investigation was made of the coffee trade. It

was found that certain merchants were mixing shipments of high-grade coffee with cheaper and inferior brands, and shipping and selling the mixture to the trade throughout the country as coffees of the higher and more expensive grades. After considerable inspection work, the practice, which was widespread and successful because of the inability of the vendee ordinarily to determine for himself the actual grades of coffee, has been largely corrected.

Among the many forms of adulteration of foods that have received special attention are the adulteration of canned tomatoes with water, of dried apples with water, and of cider vinegar with distilled vinegar; the canning of decomposed cull beans; and the manipulation of smutty barley by liming.

In co-operation with the Bureau of Standards, extensive experiments were undertaken with a view to establishing special "tolerances and reasonable variations" under the net-weight amendment to the food and drugs act. The study of dairy products is nearly completed and the results will soon be published.

Special attention was given to medicines and mineral waters bearing false and fraudulent labels. Fifty-six cases based upon such violations of the act have been disposed of in the courts favorably to the Government. Many more cases of this type are pending.

The reorganization of the field service has also led to closer co-operation with state and municipal officials. An example of such co-operation was the campaign conducted against the traffic in discarded or rejected shell eggs. These eggs, as a rule, contained a very large proportion of completely decomposed eggs and of other eggs in various stages of spoilage, with a certain proportion of fairly satisfactory eggs which might be suitable for breaking and preparing dried or frozen eggs. Co-operation with the state and municipal officials of Illinois was effective in suppressing commerce in eggs of this type. For the purpose of saving the small percentage of edible eggs which are sometimes present in these shipments, a conference was held with the egg trade and with a special committee of the National Association of State, Dairy, and Food Commissioners. As a result of this conference the state of Illinois passed a special act regulating the handling of this class of eggs, requiring that it be done in establishments entirely under its control, prohibiting traffic in eggs which are known to be bad, and regulating very carefully the traffic in eggs which might be classed as doubtful. A similar regulation of this class of eggs has been established in the state of Kansas. The general effect of this co-operation between Federal, state and municipal officials has been to bring about a much improved condition in the trade.

Similar co-operation was undertaken in conjunction with the food commissioners of the states of Illinois, Iowa, Missouri, Kansas, and Nebraska, and the Bureau of Animal Industry, for the purpose of improving the milk supplies of the small cities near state boundaries. Temporary headquarters were established in the towns in which the milk supply was to be investigated and, with the aid of the state chemists and inspectors and the city officials, thorough surveys were made of the milk supply of each town. In cases in which the milk was found to be very dirty or high in bacterial count or watered or skimmed, a special visit was paid by the inspectors, in company with the dairy expert of the Bureau of Animal Industry, to the farms from which the milk came. This party made a sanitary survey of the dairy, suggesting to the farmer possible improvements which might enable him to produce a more satisfactory quality of milk. In those cases in which chemical examination indicated adulteration or misbranding, due either to watering or skimming, a test was made of the milk from the herd. The milk shipments from these farms were then again examined later and as a rule a marked improvement in quality was found. This plan has the advantage over those usually pursued in that results are more permanent. Milk producers learn how to improve methods and state and municipal officials continued the work, thus leading to the permanent improvement of the milk supply.

In co-operation with the commissioners of various states, the Public Health Service, and the oyster industry, the sani-

tary survey of oyster beds which has been in progress for two years has been continued on the North Atlantic coast. It is leading to a more satisfactory control of the traffic in oysters from polluted waters. This work was extended to the interstate traffic in clams from polluted sections in New England.

The work of the Office of State Co-operative Food and Drug Control has been an important factor in making the co-operative work of the bureau effective. The establishment of this office was discussed in this report for the year ended June 30, 1914. Conferences have been held with all but one or two of the food, drug, and feed officials of the state. The state officials have been notified of such violations of their own laws as have been noted by Federal inspectors in the course of their regular work. State officials have been encouraged to take advantage of the authority conferred upon them by the Federal act to institute proceedings against illegal products upon their own initiative. Such a course is particularly desirable when quick action is demanded, as in the case of spoiled or decomposed perishable food products. The direct result has been that a considerable amount of such material has been barred by state authorities from sale as human food.

For a number of years a mass of information of the greatest value in the enforcement of the food and drugs act has been accumulating in the files of the Bureau of Chemistry, but it has not been in a form available for use in the bureau or elsewhere. This material is being carefully prepared so that it may be readily used and distributed to state officials.

The office of state co-operative food and drug control has also largely assisted the joint committee on definitions and standards. The organization and functions of this committee were described in this report for the year ended June 30, 1914. This committee has considered standards and definitions for flours and meals (exclusive of feeds), nonalcoholic and carbonated beverages, milk products, cocoa and chocolates, dried fruits, edible cereal pastes, gluten products and diabetic foods, soda flavors, and maple products. It has proposed standards and definitions for cacao products, gluten products and "diabetic" foods, macaroni, spaghetti, vermicelli, and similar alimentary pastes, egg noodles and plain noodles, condensed milk or evaporated milk, and maple products.

During the year a Food Inspection Decision, No. 158, based upon the recommendation of the committee, defining condensed milk, evaporated milk, or concentrated milk, was issued.

Seventy-nine opinions in the form of letters or rulings were published during the year in the Service and Regulatory Announcements.

INSPECTION.—Official samples numbering 4,412, besides 873 unofficial samples, were analyzed. Check analyses were made of 269 official samples. The number of samples analyzed is considerably less than in former years, because through co-operation between inspectors and laboratories incident to the reorganization of the bureau the collection of samples has been systematized and the collection of duplicate samples has been avoided to a greater extent than heretofore. There has also been less duplication of analytical work in the laboratories. The following table shows the number of analyses of interstate samples at each laboratory in each inspection district:

Laboratory.	EXAMINATION OF INTERSTATE SAMPLES.		
	Samples analyzed.	Check analysis of interstate samples.	Total number of interstate analyses.
Eastern district:			
Boston	273	...	273
Buffalo	219	1	220
New York	516	28	544
Philadelphia	107	1	108
Porto Rico	14	...	14
Savannah	199	5	204
Washington	290	7	297
Total	1,618	42	1,660

Central district:			
Chicago	1,041	145	1,186
Cincinnati	446	9	455
New Orleans	181	1	182
St. Louis	428	16	444
St. Paul	169	28	197
Total	2,265	199	2,464
Western district:			
Denver	174	2	176
Honolulu	16	...	16
San Francisco	214	26	240
Seattle	125	...	125
Total	529	28	557
Grand total	4,412	269	4,681

While the number of samples collected during the year was less than in previous years, the percentage of violations noted in the samples collected was greater than in previous years. This is believed to be due to closer supervision exercised over the collection of the samples.

As a result of the inspection work of the bureau, 491 recommendations for seizures and 276 recommendations for criminal prosecution were made through the office of the solicitor to the Department of Justice. In addition, evidence of conspiracies to violate the Federal food and drugs act was presented directly to some of the United States attorneys. In one case convictions and the imposition of large fines resulted. Information was also furnished to representatives of the Department of Justice of apparent violations of section 240 of the Penal Code.

Special attention was given to the inspection of foods and drugs shipped to Alaska, both at points of origin and at points of destination.

IMPORTATIONS.—Shipments of food and drugs offered for importation into the United States numbering 103,343 were examined. Of these shipments, 7,744, comprising 6,713 shipments of food and 1,031 shipments of drugs, were denied entry. Of the total number of shipments examined, 20,238 samples were analyzed in laboratories and 83,105 samples received floor inspection.

The work done on import samples by each laboratory in each district is shown by the following table:

EXAMINATION OF IMPORT SAMPLES.			
Laboratory.	Samples analyzed.	Samples inspected on floor.	Total import samples.
Eastern district:			
Boston	1,379	11,848	13,227
Buffalo	345	113	458
New York	10,458	37,003	47,461
Philadelphia	842	3,721	4,563
Porto Rico	676	2,766	3,442
Savannah	188	30	218
Washington	23	0	23
Total	13,911	55,481	69,392
Central district:			
Chicago	643	3,131	3,774
Cincinnati	1,611	324	1,935
New Orleans	438	2,023	2,461
St. Louis	88	561	649
St. Paul	115	292	407
Total	2,895	6,331	9,226
Western district:			
Denver	103	119	222
Honolulu	556	3,925	4,481
San Francisco	1,699	11,788	13,487
Seattle	1,074	5,461	6,535
Total	3,432	21,293	24,725
Grand total	20,238	83,105	103,343
The number of importations allowed entry after relabeling			

was unusually large, on account of the fact that a very large number of shipments were detained for failure to comply with the net-weight amendment of the Federal food and drug act, which took effect during the year. Partly because of this amendment, partly because more attention was paid to the supervision of importations at ports on the Pacific coast, and partly because of abnormal trade conditions, the number of shipments examined was nearly 2,500 in excess of the number examined during the fiscal year ended June 30, 1914.

An effective campaign of inspection was conducted along a part of the Canadian frontier to prevent the importation into the United States of adulterated milk and cream.

MISCELLANEOUS EXAMINATIONS.
In addition to import samples and interstate samples, the field laboratories of the bureau analyzed a large number of miscellaneous samples. The following table shows the number of miscellaneous samples analyzed by each laboratory in each district, together with the total number of samples of all classes analyzed in each laboratory of each district.

EXAMINATION OF MISCELLANEOUS SAMPLES.		
Laboratory.	Miscellaneous samples analyzed.	Total samples analyzed.
Eastern district:		
Boston	192	1,844
Buffalo	55	620
New York	187	11,189
Philadelphia	46	996
Porto Rico	5	695
Savannah	34	426
Washington	37	357
Total	556	16,127
Central District:		
Chicago	539	2,368
Cincinnati	347	2,413
New Orleans	61	681
St. Louis	156	688
St. Paul	622	934
Total	1,725	7,084
Western District:		
Denver	203	482
Honolulu	6	578
San Francisco	220	2,159
Seattle	244	1,443
Total	673	4,662
Grand total	2,954	27,873

STANDARDIZATION AND COLLABORATION.
The standard type samples for the grading of rosin, prepared by the Bureau of Chemistry, were adopted by the boards of trade of Savannah, Ga.; Jacksonville, Fla.; Pensacola, Fla.; and Mobile, Ala.; the produce exchanges of New York City and New Orleans, La., and the state of Florida. Independent producers, dealers, and consumers generally also adopted these standards. These types have thus become the recognized standards on which all rosin transactions are based. It was contemplated that the glass types should be used in all grading, but it was impossible to secure enough of the proper material from European countries, with the result that a sufficient number of standards is not yet available. The glass standards, therefore, have been used mainly for the preparation of rosin types. Examinations of these types by the bureau have shown less variation than existed before the glass standards were issued. The agreement with the standard, however, is not entirely satisfactory, as the bureau has frequently pointed out, owing to the great difficulty in obtaining rosin precisely on the standard and to difficulty in cutting the pieces of rosin.

Collaboration with the University of Idaho on the chemical utilization of Idaho woods, begun during the previous fiscal year, was continued.

Foods, Adulterants and the Law

In this Splendid Article on Food and Drug Control Dr. S. J. Crumbine, One of the Foremost Authorities in the Land, Discusses the Object of the Laws, Their Practical Application and the General Principles of Food and Drug Inspection.

(Continued from previous issue.)

PRESERVATIVES IN FOODS.—The act authorizes the Bureau of Chemistry of the United States Department of Agriculture to decide whether any food product contains any deleterious substance, and the Bureau is charged, in a general way, with the enforcement of the act. Soon after the law became effective, the Bureau held that the use of benzoate of soda as a preservative was detrimental to the health of those consuming food products containing this preservative. A storm of protest and criticism was raised by the manufacturers using this preservative, whereupon the Bureau undertook to make a practical test as to the effect of benzoate of soda on a number of young men who were fed upon foods containing certain definite amounts of the preservative. This group of young men afterward became known as "The Poison Squad." The result of the experiments as interpreted by the Bureau of Chemistry was that sodium benzoate is a substance that is deleterious to health, and that it, therefore, should not be permitted to be used as a preservative in food products. This decision was hotly contested by a large number of manufacturers, together with certain scientists, who declared that the interpretation of the results of the experiment was not properly made. President Roosevelt, upon being appealed to, appointed a "Referee Board of Consulting Scientific Experts," whose duty it should be to investigate certain technical questions involved in the administration of the food and drugs act. Their special duty in relation to the investigation of benzoate is clearly set forth in the report of the board, which is as follows:

"(1) Does a food to which there has been added benzoic acid, or any of its salts, contain any added poisonous or other added deleterious ingredient which may render the said food injurious to health? (a) In large quantities? (b) In small quantities?

"(2) If benzoic acid or any of its salts be mixed or packed with a food, is the quality or strength of such food thereby reduced, lowered or injuriously affected? (a) In large quantities? (b) In small quantities?"

Their report as made to Hon. James Wilson, Secretary of Agriculture, and published in United States Department Agricultural Report No. 88, is, in summary, as follows:

"To obtain satisfactory answers to these questions, the board has felt it necessary to carry through a careful investigation of the effect of benzoic acid or some one of its salts on the nutrition and general health of man. A thorough study of the literature giving the results of work done by various investigators on the physiological effects of benzoic acid and its salts, together with a study of reported clinical and medical observations, therapeutic usage, etc., have made it apparent that additional work was needed to render possible a conclusive answer to the above questions.

"With a view to limiting the scope of the work, while at the same time meeting all practical requirements, our investigation, with the consent of the Secretary of Agriculture, has been confined to a study of the effect of the sodium salt of benzoic acid, viz., sodium benzoate.

"To make this experimental inquiry as thorough as possible and to minimize the personal equation, three independent investigations have been carried out; one at the Medical School of Northwestern University in Chicago, under the charge of Prof. John H. Long of that institution; a second at the private laboratory of Prof. Christian A. Herter of Columbia University, New York City, and the third at the Sheffield Scientific School of Yale University, in charge of Professor Russell H. Chittenden.

"The same general plan of procedure was followed in all three experiments. A certain number of healthy young men

were selected as subjects, and during a period of four months these men, under definite conditions of diet, etc., with and without sodium benzoate, were subjected to thorough clinical and medical observation, while the daily food and the excretions were carefully analyzed, and otherwise studied, and comparison made of the clinical, chemical, bacteriological and other data collected. (For details see the individual reports.) In this manner material has been brought together which makes possible conclusions regarding the effect of small and large doses of sodium benzoate upon the human system.

"In fixing upon the amount of sodium benzoate that should constitute a 'small dose' we have adopted 0.3 gram of the salt per day. Manufacturers of food products which, in their view, require the use of a preservative are in general content with 0.1 per cent of sodium benzoate. This would mean that in the eating of such a preserved food the consumer would need to take 300 grams per day, or nearly two-thirds of a pound, of preserved food to ingest an amount of benzoate equal to our minimal daily dosage. Looked at from this point of view, our dosage of 0.3 gram per day seemed a fair amount for a 'small dose,' one that would clearly suffice to show any effect that small doses of the salt might exert, especially if continued for a considerable length of time. In all these three experiments this daily dosage was continued for a period of about two months. Under 'large dose' was included quantities of sodium benzoate ranging from 0.6 gram to 4 grams per day. Such a daily dosage was continued for a period of one month. In a few instances somewhat larger doses were employed.

"As the amount and character of the daily diet exert a well-known influence upon many of the metabolic or nutritive changes of the body, as well as upon the bacterial flora of the intestines, attention is called to the fact that the three investigations differed from each other in the amount of protein food consumed daily, thereby introducing a distinctive feature which tends to broaden the conditions under which the experiments were conducted.

"The conclusions reached as a result of the individual investigations are given at length in the separate reports herewith presented, together with all of the data upon which these conclusions are based. The fact should be emphasized that the results obtained from the three separate investigations are in close agreement in all essential features.

"The main general conclusions reached by the referee board are as follows: (1) Sodium benzoate in small doses (under 0.5 gram per day) mixed with the food is without deleterious or poisonous action and is not injurious to health. (2) Sodium benzoate in large doses (up to 4 grams per day) mixed with the food has not been found to exert any deleterious effect on the general health, nor to act as a poison in the general acceptance of the term. In some directions there were slight modifications in certain physiological processes, the exact significance of which modifications is not known. (3) The admixture of sodium benzoate with food in small or large doses has not been found to injuriously affect or impair the quality or nutritive value of such food.

"IRA REMSEN, Chairman,

"RUSSELL H. CHITTENDEN,

"JOHN H. LONG,

"CHRISTIAN A. HERTER,

"Referee Board of Consulting Scientific Experts."

The former decision of the Bureau of Chemistry was, therefore, overruled, and the Secretary of Agriculture, at the direction of President Roosevelt, made a supplemental order permitting the use of sodium benzoate for the preservation

of foods, providing only that a statement be made upon the label indicating the presence of such preservative when used.

In like manner, the question as to the use of sulphur dioxide, copper sulphate, alum, saccharin, borax or borates and other preservative substances has been referred to the Referee-Board of Consulting Scientific Experts for determination as to their wholesomeness, or otherwise, when used in food products.

The chief objection to the use of benzoate of sodium or other chemical preservatives in food products is, that the addition of such preservatives makes it possible to use inferior and partially spoiled raw material in the preparation of food products; and this is said to be also an effective way to prevent the natural result of fermentation and spoilage which are sure to follow insanitary conditions in manufacturing establishments.

Guarantee Provision.—Section 9 provides that “No dealer shall be prosecuted under the provisions of this act when he can establish a guarantee signed by the wholesaler, jobber, manufacturer or other parties residing in the United States from whom he purchased such article, to the effect that the same is not adulterated or misbranded within the meaning of the act designating it.”

The purpose of this provision of the act is to fix the guilt on the real guilty party and to afford protection to the innocent dealer who, from the very nature of things, is often unable to determine as to whether an article of food or drug is adulterated or misbranded. The Bureau of Chemistry has provided, by regulation, a way in which each original package article may be guaranteed under the provisions of this section by issuing a serial number to manufacturers or jobbers which, when placed upon the label of an article, acts as a guarantee to the dealer to whom the article is sold. Theoretically, this seems to be an easy and certain way to fix responsibility on the guilty party and to protect the innocent dealer, but as a matter of fact, in actual practice, this so-called “Guarantee Legend” has been one of the most potent methods of deceiving the ultimate purchaser or consumer, in that the notion is almost universally prevalent that an article of food or drugs upon which appears the guarantee serial number legend is guaranteed by the government to be free of adulteration or misbranding, and thus, in many instances, the very intent and purpose of the law is defeated by this unfortunate measure.

A number of the states, following the lead of the federal government, provided for the issuance of guarantee serial numbers under their state laws, but the abuse of this guarantee legend was so apparent, because it was used for advertising purposes, and its effect was so misleading that it has been discontinued by a number of states. At a conference of the State Food and Drug Control Officials with the Chief of Bureau of Chemistry, held in Washington, D. C., in November, 1913, a resolution was adopted denouncing the use of the guarantee serial number, and requesting that it be discontinued at the very earliest possible date for the reasons above stated.

Seizure of Adulterated or Misbranded Products.—Section 10 of the Act provides “That any article of food, drug or liquor that is adulterated or misbranded within the meaning of this act, and is being transported from one state, territory, district or insular possession to another for sale, or, having been transported, remains unloaded, unsold, or in original unbroken packages, or if it be sold or offered for sale in the District of Columbia or the territories, or insular possessions of the United States, or if it be imported from a foreign country for sale, or if it is intended for export to a foreign country, shall be liable to be proceeded against in any district court of the United States within the district where the same is found, and seized for confiscation by a process of libel for condemnation.”

It will be noted that this section, in contradistinction to the other provisions of the law, is a procedure against an article that is adulterated or misbranded. No hearing is required to be held, although it is necessary for the Bureau of Chemistry, or an agent or inspector acting under the authority of the Bureau, to determine by investigation as to whether or not the article in question is adulterated or misbranded.

When a procedure is started in the United States District Court in the jurisdiction in which the alleged adulterated or misbranded product is found, the United States marshal seizes the goods and they are then held under the authority of the court until trial of the case and verdict of the court. In case the article in question is of a poisonous or deleterious character, it is the duty of the court to dispose of the article by destruction. If, however, it is simply a question of misbranding, or of non-deleterious adulteration, the goods may be restored to the owner upon filing bond with the court to the effect that such article shall not be sold or otherwise disposed of contrary to the provisions of the act, and, upon the payment of the costs of libel, the goods may be released. It has been found in practice that this is a wise provision of law because quick action can be taken against goods that are unwholesome or deleterious, and by seizure and condemnation, prevent such unwholesome or deleterious products to be sold to the ultimate consumer. Two modes of procedure are contemplated by the national food and drug act; first, criminal action against the person or persons violating the provisions of the act, and second, seizure and condemnation by libel of the articles that are adulterated or misbranded within the meaning of the act. Criminal action against those violating the law, as provided in the act, is often long delayed, while the goods may meanwhile find a market in the channels of trade, much to the detriment of the public welfare. A number of the states do not have a like provision in their laws, and are thus unable to seize and condemn goods which, in many instances, the protection of the public health would seem imperatively to demand.

Sanitary Aspects of Food and Drug Inspection.—One of the anomalies of our dual system of government is clearly shown in the limitation of the National Food and Drug Act to have sanitary supervision of persons and things, or the places where food and drug products are manufactured, stored or sold. Sanitary control is essentially a police measure, and at the time of framing the federal constitution, all police powers were retained by the respective states, and thus the national government finds itself barred by the constitution in passing legislation which would give it sanitary supervision over places, persons and things in their relation to food and drug production. It follows, therefore, that whatever sanitary control is exercised in this direction must be by the several states, and it has only been in very recent years that the states have recognized the importance of sanitary supervision in food control. The Association of American Dairy, Food and Drug Officials at their annual meeting in 1911 adopted a model sanitary law, with recommendation that effort be made for its enactment in every state in the union represented in the association. Accordingly, this law was presented to the respective legislatures and quite generally enacted into law by the respective states, so that, today, there are few states in the union but what have laws giving to boards of health or food commissioners authority and power to regulate sanitary conditions in food and drug establishments.

It is quite generally admitted that most misbranding or adulteration is of a harmless character, so far as public health is concerned, the question of fraud or deception being the chief element in either adulteration or misbranding, but it is, also, quite generally conceded that the sanitary conditions under which food and drug products are manufactured, stored and sold are of vital importance as affecting the quality and wholesomeness of the product and the health, not only of the employes handling such products, but of the ultimate consumer as well. It has long since been demonstrated that the mere passage of a law prohibiting the adulteration or misbranding of foods and drugs, or requiring places and things to conform to certain sanitary standards, will not bring about the desired ends unless provisions are made for frequent personal inspection by trained inspectors. Recognizing this principle, every state where efficient food and drug control has been established has qualified inspectors whose duty it is carefully to inspect all places and things as to their sanitary condition, and to secure samples of products for analyses to determine whether or not misbranding or adulteration exists. Thus, effective enforcement of the laws is brought about.

A sanitary inspection of a manufacturing establishment comprehends, (1) the character and quality of the raw material used; (2) the methods of manufacture and storage; (3) the sanitary condition of the manufacturing plant, including all appurtenances, and (4) the health of the employes working therein.

Most of the states have adopted a sanitary score card, which comprehends in the score the conditions actually found on the points above stated, and wherever insanitary conditions are found the law authorizes the inspector to make an order that within a certain stipulated and reasonable time the insanitary conditions shall be abated, or certain specific improvements shall be made whereby the wholesomeness of the product may be safeguarded and the health of the employes maintained. If, after the expiration of the reasonable period of time stated in the order, steps have not been taken to comply with the same, the law authorizes that information may be filed with the proper authorities for the enforcement of the law.

Both the national and the various state laws require that manufactured food products be made from sound, wholesome material. Fruits and vegetables that have fermented or have become decomposed, in whole or in part, or are dangerously polluted by pathogenic organisms, are not to be used for food purposes. It is also required that, where pieces or trimmings, or peelings and cores, or any other refuse materials are used, they shall be wholesome and fresh, and that the label on the container shall disclose the fact that the product is made from pieces, trimmings, etc., as the case may be.

Sidewalk display of perishable food products in retail establishments has been prohibited in most of the states, the law allowing only such food articles that are necessarily peeled, pared or cooked before being consumed, to be displayed upon the sidewalk, or on the store floor, provided that such articles are displayed at least eighteen inches above the sidewalk or floor. The model sanitary law, also, provides that all perishable foods be effectively protected by screens or coverings from the possible contamination of dust or flies.

Proper toilet facilities are required in all food producing establishments, and abundant facilities are required for the proper washing of the hands of all employes after visiting the toilet before returning to work.

The wholesomeness of the water supply, as well as the sewage disposal, is inquired into, and definite standards are applied to the proper installation of wholesome water supply and proper sewage disposal.

Meats are required to be covered in transit from the slaughtering establishments to the markets or shipping places, and only such cars are to be used for the shipping of food products as are reasonably clean, in order that such products may not be dangerously contaminated by polluting organisms or foul odors or flavors.

Physical Examination of Employes.—The one great defect in securing absolute freedom from dangerous contamination of food products is that of inability, up to the present time, to require definite knowledge that all persons handling food products are free from communicable disease. It is believed the next great reform movement in food control must be along this line. In Kansas, the State Board of Health has recently secured the co-operation of the large meat packing establishments in requiring that all employes handling meats or meat products be required to pass a physical examination for communicable disease of any kind, including tuberculosis and venereal disease, before they can either find employment or be permitted to continue in the employment of these establishments.

In 1912 the largest hotel in the city of Indianapolis put into effect a like requirement and gradually, by the force of public opinion and the insistence of boards of health, this great desideratum in safeguarding the wholesomeness of food products is being brought about.

Inspection of Meats.—The federal meat inspection act provides for the ante-mortem and post-mortem inspection of all

animals slaughtered for food that are shipped in interstate trade, and regulates the manner of labeling all meat food products. Indirectly the federal government exercises sanitary supervision of federal-inspected meat packing plants by requiring certain sanitary conditions to prevail before installing a system of federal inspection or, after once having been established, if insanitary conditions continue to prevail, by withdrawing federal inspection. The last report of the Bureau of Animal Industry indicates that approximately 65 per cent of the animals slaughtered for food purposes in this country are slaughtered in federal-inspected packing establishments, leaving 35 per cent slaughtered in local slaughter houses not engaging in interstate trade, and which are not under local inspection, except in a few isolated instances where municipal abattoirs have been established. The very fact that animals that are diseased, or are unfit for food for any reason, are condemned by the federal-inspected slaughterhouses tends to divert such diseased animals to establishments having no inspection, and thus the importance of local meat inspection for all slaughtering establishments is emphasized. If there is a reason for inspecting 65 per cent of the animals slaughtered for food purposes, there can be no possible reason for the remaining animals thus slaughtered not having effective inspection.

Local Inspection of Perishable Products.—Such articles of food supply as milk, meats, bakery products and perishable fruits and small vegetables that are sold at or near the point of production must, in the very nature of things, be inspected by state, or better yet, by municipal authorities, if a perfect system of food control is established. There may come a time, and probably will, when, in municipalities, trained sanitarians will have the care of local food problems, but until that times arrives the state, with its better organized forces, better equipped laboratories and more highly trained men, must assume control and provide for the safeguarding of all food supplies after they have passed from federal jurisdiction, or city regulation, and are distributed wholly within the state limits.

It is believed that food and drug control is essentially a public health problem, and should properly be made a function of the State Department of Health, but strangely enough in most of the states this division of the state's service is under separate food commissions, or the agricultural department or under dairy commissioners. Such officials may well regulate the sale of oleomargarine and improve the quality of the milk supply, but they can hardly be expected to be in touch with modern sanitary problems and have a keen appreciation of the necessity for absolute sanitary conditions in the production and handling of food products to safeguard the public health.

Health officers are primarily interested in the character of the milk supply, not because they wish to build up a dairy industry, but because they know that pure milk means decreased infant mortality. They are interested in sanitary slaughterhouses, not that the butchers may have a profitable business, or that the production of beef and pork may be increased, desirable as that may be, but because they know that the sale of diseased meat and meat handled under insanitary conditions is a menace to the health of the consumers. They know that pure water means freedom from typhoid fever and dysentery; that the cook or baker suffering from tuberculosis is earning a living under conditions which are a menace to the health of his patrons, and that venereal disease must be stamped out if the consumers are to be assured clean foods. Food officials must assume the responsibility, not only of enforcing the laws, but of educating the people in the basic principles that make legislation necessary, and pointing out clearly and definitely the economic principles that are behind pure food and the ultimate danger that lies in impure food.

False Advertising.—It is becoming increasingly evident that the enactment and fairly efficient enforcement of the national and state food and drug laws has not secured to dealers and consumers freedom from fraud and deception in food and drug products.

Memorandum to the President of the United States on the Need for Amendments to the National Food and Drug Act

Presented by a Committee from the American Pure Food League, November 15, 1915.

THE undersigned represent a committee from the American Pure Food League. The membership of the League comprises many who have given special thought to food control work, including those who have been intimately associated with the investigation of facts and the administration of the laws.

The pure food laws of the nation, states and cities are the development of the last twenty years. These laws were necessarily general in scope, in the beginning. As experience has increased, the need for changes in legislation, and for more definite legislation, is shown.

The National Food and Drugs Act has accomplished splendid results in the nation's food supply. This act, once opposed by many in the food and drug trade, is now looked upon as the means of uniformity and as a source of the facts upon which the interstate questions, involved between this and local laws, may be settled. In many states and cities, legislation has progressed farther than national legislation; in others, the law lags behind. All agree that the national law should be a model for uniformity. There are two kinds of uniformity. It is necessary that we have uniformity on a basis of efficient protection to the consumer, and constructive methods of regulation to the trade.

Need for Standards.—The national act provides for regulations, Section 3, as follows:

"That the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce and Labor shall make uniform rules and regulations for carrying out the provisions of this act, including the collection and examination of specimens of foods and drugs * * * ."

In theory, this is ample authority; in practice, we need a body of experienced men to work constantly on questions of fact involved in the enforcement of the law, and to place responsibility squarely upon their shoulders for their findings. It is necessary to standardize food products; there must be some standard for measuring—a yardstick so to speak. There is need to know the character of flour, coffee and sugar, and the character of the different grades of one product. Milk, for example, divides itself into several sanitary grades. The control necessary for one grade differs from the control necessary for another grade. One grade may be fit for infant feeding, another only fit for cooking purposes.

A joint committee composed of representatives from the food control departments of the national and state governments and from the Association of Official Agricultural Chemists have been at work for a long time upon food standards, and are at present co-operating with the Secretary of the Department of Agriculture and its Bureau of Chemistry. This arrangement is most satisfactory to the officials engaged in the work. The committee needs support from Congress, and it needs additional members from those engaged in sanitary investigations and the practical side of food preparation. The committee, as it exists, may be taken as an excellent nucleus for an authorized committee from the national government.

Sanitation.—The federal Food and Drugs Act prohibits the interstate transportation of an article of food:

"If it consists in whole or in part of filthy, decomposed, or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter."

This remedy must wait until the food has become con-

taminated, and so a loss to the food supply of the nation. Food sanitation is of tremendous economic importance as well as of vital concern to public health. The loss from food spoilage amounts, annually, to many hundreds of millions of dollars.

The remedy must go further than the destruction of unfit food. It must seek out and correct the conditions responsible for contamination, deterioration and spoilage. The remedy contained in the act is destructive. The remedy needed must be constructive and protective. There is wide need for the exercise of constructive sanitary control over the foods intended for interstate commerce. A majority of the larger American cities obtain a part of their milk supply from other states. Butter, oysters, fish, poultry and eggs need sanitary protection from the time of production until sold to the consumer. The methods of such sanitary control can be made helpful to the trade. Factories, and other places, preparing food for interstate commerce, should be required to operate under a permit from the national government, dependent upon the employment of the equipment and methods necessary for sanitary protection. The national and state governments have done much to increase production on the farm, and are doing much for the protection and care of food in the home; but the gap of manufacture and transportation, storage and retail sale needs equal supervision and constructive governmental aid. All classes are interested in anything that affects the wholesomeness of foods during the process of their preparation and sale. Grading, protection from spoilage and better quality are of equal interest to the producer, on the one hand, and the consumer, on the other, and the establishment of these means greater confidence to those engaged in the preparation and sale of food.

Food sanitation is a vital public health question. The death rate of cities is raised or lowered as attention is given to the sanitary condition of its food supply. A large part of this problem is within the jurisdictional limits of interstate commerce, and it is needed that Congress and the national government give fuller effort to that part of the problem for which they are responsible.

Extension of Meat Inspection Service.—The federal government has organized and maintains a splendid organization for the inspection of meat intended for interstate commerce. The most economical, and undoubtedly the most effective, method for the inspection of the meat supply of cities not now under federal control, would be through the extension of the federal meat inspection service. With such extensions the federal service could inspect plants maintained in harmony with its sanitary standards, and at the same time inspect the meat supply arriving from interstate commerce and which, while inspected at the time of shipment, needs to be re-inspected at the place received. Centralized abattoirs, under efficient inspection, represent a striking instance of how consumers and animals can be protected from the spread of disease, and it is estimated that the economic losses attending insanitary killings in the United States amounts annually to more than \$60,000,000. The cost of extending this service would not be heavy from year to year, and the meat inspection act could be so amended as to make it possible for the Department of Agriculture to offer and the cities to accept inspection for municipal plants in all cases where proper requirements are complied with.

Preservatives.—The federal act provides against the interstate transportation of a food product—

"If it contain any added or poisonous or other added deleterious ingredient which may render such article injurious to health; Provided, That when in the preparation of food products for shipment they are preserved by any external application applied in such manner that the preservative is necessarily removed mechanically, or by maceration in water, or otherwise, and directions for the removal of said preservative shall be printed on the covering or the package, the provisions of this act shall be construed as applying only when said products are ready for consumption."

The question has naturally been raised as to what substances and in what amounts certain substances are unwholesome. There are many preservatives which those intimately associated with the food control work believe should be altogether prohibited. There can be no honest objection from any quarter to the proposition that substances, the wholesomeness of which has been questioned and the facts of which are in the process of investigation, should be stated on the label, and allow consumers to judge for themselves. The government has several of such questions under consideration and in the process of litigation. The decision of the United States Circuit Court of Appeals in the bleached flour case indicated that the addition of chemicals, however small the amount in food, constitutes a compound, and as the law requires the labeling of compounds, it is the opinion of many that the act can be enforced to require the labeling to show the presence in the food of all such substances, pending final determination as to whether prohibition shall ensue. If there is any question in the minds of the government as to this point, the act should be amended so as to plainly provide for labeling in such cases.

Labeling.—One labeling section of the national act provides for the labeling of products in a manner as follows:

"In the case of articles labeled, branded, or tagged so as to plainly indicate that they are compounds, imitations, or blends, and the word 'compound,' 'imitation,' or 'blend,' as the case may be, is plainly stated on the package in which it is offered for sale; Provided, That the term blend as used herein shall be construed to mean a mixture of like substance, not excluding harmless coloring or flavoring ingredients for the purpose of coloring and flavoring only. And provided further, That nothing in this act shall be construed as requiring or compelling proprietors or manufacturers of proprietary foods which contain no unwholesome added ingredient to disclose their trade formulas, except in so far as the provisions of this act may require to secure freedom from adulteration or misbranding."

This unplain section has been copied into some of the state laws, and it is urged by many as a basis for uniformity. It is unplain. It necessitates an immaterial controversy as to whether a product is a compound or a blend. The consumers know little and care less as to whether the product has been produced by compounding or by blending. What they want to know is the exact nature and character of the product. This section has involved much litigation over the meaning of certain food terms, whereas a plainer section, requiring the exact nature and character to be stated, would give consumers information as to the kind, class or grade of products.

Fraudulent Coloring.—A section of the act prohibits an article—

"If it be mixed, colored, powdered, coated, or stained in a manner whereby damage or inferiority is concealed."

The act should also prohibit any bleaching or coloration that deceives the consumer in any other way, as well as the concealment of inferiority.

Medicinal Preparations.—The national and state laws have eliminated many false and misleading statements from the labels of medicinal preparations, and have required a certain class of harmful ingredients to be stated in the label. There can be no honest reasons why the entire formula should not either be stated on the label or required to be filed with administrative departments in order that therapeutic and other claims may be checked in connection with the ingredients contained. Misleading statements are also made in the advertisements of such medicinal preparations

as well as in the advertisements of many food products. An amendment is needed to prohibit such misstatements, wherever made, and it should be possible to apply interstate authority to all interstate lines, or use the United States mails.

More Funds for Inspection.—The Bureau of Chemistry needs more funds for inspection. The present force is inadequate to put the act into every day effect, at all points.

Authority to City Food and Drug Inspection Departments.—The act should be amended so that the Secretaries of Agriculture, Treasury, and Commerce may in their discretion give to city food and drug officials equal authority with state officials in the enforcement of the act.

All of such and other amendments added to the national act ought and must be drafted so as to provide an effective and acceptable basis of uniformity with state and municipal legislation. There is enough collective experience and enough broad spirit on the part of the food and drug trade to help to formulate and to support the passage of amendments on such a basis.

In presenting this memorandum to the President, the committee wishes to express its confidence in the excellent work being done under existing laws by the Secretary of Agriculture and the Bureaus of Chemistry and Animal Industry, and equal confidence in the work being done by the Bureau of Public Health in the Department of the Treasury.

Respectfully submitted. (Signed.) R. M. Allen, Pres. and Chairman; E. F. Ladd, Vice-Pres.; Alice Lakey, Exec. Sec.; R. E. Rose; William Frear; H. E. Barnard; John P. Street; Lucius P. Brown.

Patents and Copyrights

The following patents of interest to readers of this journal recently were issued from the United States Patent Office. Copies thereof can be obtained from R. E. Burnham, patent and trade-mark attorney, 882 Bond Building, Washington, D. C., at the rate of 20 cents each. State number of patent and name of inventor when ordering.

1,161,039. Meat and bone cutting machine. Jesse B. Foight and Atwood M. Newell, Irin, Pa., assignors to U. S. Slicing Machine Co., Chicago, Ill.

1,161,124. Method for preserving eggs. Edwin R. Gill, Yonkers, N. Y.

1,161,211. Potato screening and sorting machine. Thomas S. Harris and Joseph P. Morgan, Eldridge, Tex.

1,161,323. Puffed cereal flake. Frank B. Martin, Battle Creek, Mich., assignor to Postum Cereal Co., Ltd., same place.

1,161,413. Vegetable - paring machine. Henry Robinson, South Orange, N. J.

1,161,450. Beet-root cracker or food. William L. Breyfogle, Lake George, N. Y.

1,161,466. Feeding mechanism for uppercut apple-slicing machines. Frank B. Foley, Ingersoll, Ontario, Canada.

1,161,496. Fruit-stoning apparatus. Bernhard Mai, Bergenfield, N. J.

1,161,550. Method and means for preserving food products. Benjamin W. Tucker, South Orange, N. J.

1,161,727. Fruit-washer. Frank C. Randall, Benton Harbor, Mich.

1,161,811. Process of removing or breaking the shells of cocoanuts. Robert W. P. Horn, Allentown; Jacob H. Nissley, Manheim, and Daniel B. Latimer, Philadelphia, Pa.

1,161,826. Apparatus and process for purifying starch. Louis P. Bauer, Pekin, Ill.

1,161,845. Meat-tenderer. Ralph F. Chatillon, Greenburg, N. Y.

1,161,925. Coffee composition. Thomas A. Crawford, Louisville, Ky.

1,161,963. Gooseberry cleaner. Robert L. Pebley, La Fayette, Ore.

1,162,123. Prune grader, cleaner and spreader. Frederick J. Yandle, Santa Rosa, Cal.

Interesting Data on Oleomargarine

Furnished by Commissioner of Internal Revenue.

THE operations in oleomargarine for the fiscal year ended June 30, 1915, show a slight increase over the preceding fiscal year, there being reported produced 138,214,907 pounds of the uncolored and 7,595,141 pounds of the artificially colored product, or a total of 145,810,048 pounds of both classes, compared with 137,637,054 pounds of the uncolored and 6,384,222 pounds of the colored product, making a total of 144,021,276 pounds of both classes produced during fiscal year ended June 30, 1914.

From these figures it will be noted there was an increase during the fiscal year 1915 of 577,853 pounds of uncolored and 1,210,919 pounds of the artificially colored goods, or a total net increase of 1,788,772 pounds in the two classes over the previous year.

During 1915 there were withdrawn tax paid at one-fourth cent 137,693,610 pounds, and 3,753,012 pounds tax paid at 10 cents, as against 137,747,982 pounds and 3,831,706 pounds of the two classes respectively in the previous year, or a net decrease of 54,392 pounds in the uncolored and 78,694 pounds in the colored product, making a total net decrease of 133,086 pounds in the withdrawals of the product tax paid in both classes.

In 1915 the withdrawals for export amounted to 31,172 pounds uncolored; 3,081,356 pounds of colored goods, a total of 3,112,528 pounds, or an increase of 968,826 pounds over the previous year in these items.

There were withdrawn free of tax for use of the United States in 1915, a total of 734,030 pounds of artificially colored oleomargarine and none of the uncolored product, as against a total of 579,360 pounds of both classes in 1914, or an increase of 154,670 pounds in the withdrawals for this purpose during the past year.

The collections from oleomargarine sources during the fiscal year 1915 amounted to a total of \$1,695,256.95 as against a total of \$1,325,219.13 in 1914. Of this amount \$761,200.63 was from stamp tax at 10 cents per pound; \$347,141.81 from stamp tax at one-fourth cent; \$586,914.51 special taxes of manufacturers and of wholesale and retail dealers in the two classes, this being an increase of \$341,326.49 in stamp taxes at 10 cents per pound; \$3,229.65 from stamp tax at one-fourth cent, and \$25,481.68 from special taxes of manufacturers and dealers, or a total net increase in collections from all oleomargarine taxes of \$370,037.82 in 1915.

These figures do not include amounts collected by compromise in cases growing out of violations of the oleomargarine law on account of the manufacture and sale of the product without payment of special and stamp taxes, or on account of placing the product on the market as uncolored goods under one-fourth cent stamp or as butter, without payment of any tax thereon, and thus evading tax at the rate of 10 cents which was due on the artificially colored product so manufactured and sold.

The investigations instituted and conducted into oleomargarine violations during 1914 were continued with renewed energy during 1915 with gratifying results, as a number of the largest cases involving extensive frauds in stamp taxes due, in which investigations were begun the latter part of the preceding year, were completed and additional new cases of lesser importance discovered during the current year.

The total amount of taxes out of which the government had been defrauded on account of artificially colored oleomargarine being placed on the market under stamps at one-fourth cent instead of at the rate of 10 cents per pound due on such product in four of the largest cases of this character ever discovered were definitely determined during 1915, and the sum found due reached the enormous total of \$17,692,410.47, representing the tax on practically all of the oleomargarine produced and placed on the market as uncolored oleomargarine under the one-fourth cent stamp by the manu-

facturers in question since the inception of the present law on July 1, 1902.

In addition to the completion of these four cases, one other case was discovered during the current fiscal year where the amount out of which the government had been defrauded amounted to \$1,503,203.30, which sum represented the tax of 10 cents per pound on the product manufactured for a period of six years that these frauds had continued undetected, and during which time all of the product in this case was placed on the market as butter without payment of any tax. These five cases alone involved a total of \$19,195,613.77 stamp tax due the government, which figures do not include special taxes of dealers incurred on account of the purchase and sale of the product.

Of this latter amount, only \$4,611,051.83 was within the assessable period of two years, the remainder being collected only by suit. Assessments of stamp taxes to this amount were made on suits instituted to recover the balance, or such portion thereof as might be possible, and during the fiscal year 1915 there had been collected approximately \$751,000 from these five cases and arrangements perfected whereby further recoveries of these taxes are expected to be made within the next fiscal year.

The principal officers and employes of the companies involved in the above-mentioned frauds were indicted, and in three cases where trials have been held all were convicted or plead guilty and received sentences of fines or imprisonment, or both.

In addition to these cases a large number of violations involving illicit coloration of white oleomargarine and sale of the product without payment of tax at 10 cents per pound due, and in many instances as and for butter, and of other infractions of the law, were discovered during 1915 and prosecutions instituted in all of these cases where the facts warranted such action.

Convictions upon trial by jury or pleas of guilty have been secured in every case tried since January 1, 1915. A summary of this work shows a total of 2,777 violations discovered during 1915 involving 2,411 persons, as against 2,704 violations involving 2,327 persons reported during 1914. These violations reported during 1915 were against 75 persons as manufacturers, 95 as wholesale dealers, and 2,241 as retail dealers.

These results, growing out of the thorough and sweeping investigations and vigorous efforts to enforce this law, only emphasize the incentive to fraud under the present oleomargarine statutes and the need of amendatory legislation to correct these faults, and at the same time afford adequate protection to the revenues and to the public.

It is again recommended that the present law be amended by repealing those provisions imposing double rates of tax upon the product and special taxes on dealers, and substituting therefor a flat rate per pound upon the product and single rates of special taxes upon wholesale and retail dealers, with provisions for individual or original packages of certain sizes fixed by law, all of which shall bear tax-paid stamps, marks, and brands so as to clearly identify the character of the product to the purchaser.

Under such a law imposing a flat rate of 2 or 3 cents per pound on the product and special taxes of \$240 and \$24 per annum upon wholesale and retail dealers, respectively, without regard to the color of the product, it is estimated upon the basis of production for the fiscal year ended June 30, 1915, that the total collections would amount to between \$4,500,000 and \$7,000,000 per annum, with a continued increase in collections from this source in proportion to the increase in the production of oleomargarine from year to year.

ADULTERATED BUTTER.

During the year ended June 30, 1915, there were reported 30 cases against manufacturers of adulterated butter, 5 as

wholesale dealers and 5 as retail dealers, making a total of 40 violations of the act of May 9, 1902, as compared with a total of 61 such violations discovered during 1914. With but one exception all of these cases were against manufacturers who had produced and placed on the market butter containing 16 per cent or more of moisture. The exception referred to was where the manufacturer had incorporated or added a foreign substance to the butter, and this was the only case in which prosecution was instituted.

Washington News Letter

Washington, Dec. 31.—The day of the "fighting brand" is coming to an end shortly. The Federal Trade Commission is handling the subject. Thus far it is known positively that one big food manufacturer has given a promise that he will no longer employ it in the comparatively small market in which he has an active and vigilant competitor whose business is confined wholly to one state.

Owing to the policy of the Commission in not making public the names of business men who promise to be good, it is not possible to say more than that the offender has preferred to promise to be good rather than face an open, formal investigation of his business methods. Such an investigation, it is believed he figured would hurt him more than the advantage he believed he was gaining by using a label and brand something like that of his competitor.

That case could probably have been handled in the courts. The trade commissioners believe, however, that if the small man had gone to court, the larger concern would have been so sore at the publicity that it would have spent thousands in litigation, thereby making it necessary for the smaller man to also dig into his smaller purse for the sinews of war.

The trade commissioners figure that in cases in which the offender confesses and gives convincing assurances that he will quit his bad ways, it will be better for it not to subject the guilty ones to the comment of others in the trade. The disappearance of the misleading label or brand, it is believed, will be notice to the trade that something unpleasant has happened to the big offender, although that inference will not always be the correct one. The only unpleasantness that may have been suffered is that of the humiliation of having the attention of the Trade Commissioners directed to a sneaking method of doing business.

This dealing with brands and labels is no trenching upon the jurisdiction of the secretary of agriculture. A misleading brand, as the words are used at the trade commission means one that misleads the purchaser, not as to the quality, but as to the manufacturer of the goods. For instance the name, Hine's Almond Cream, suggests a toilet preparation manufactured by a concern that has spent hundreds of thousands in one form or another of advertising. The deception is possible only because the buyers depend upon their ears to guide them with regard to the original preparation. They do not use their eyes, or if they do, the use is so fleeting as to leave no permanent impression as to the proper name, or the complete name of the preparation.

Such a brand, in the absence of overwhelming proof to the contrary, would be instantly set down as an imitation. A court would issue an injunction against its use unless it was shown that the proper name was used in good faith, and that both manufacturers entered upon the manufacture of a toilet preparation at about the same time. Proof of that kind would show that neither was imitating either the goods or the name of the other. The questions raised by a complaint alleging that one was an imitation of the other would not officially interest the secretary of agriculture because, even assuming that the toilet preparation came within the definition of a medicine or a preparation for the relief of pain, there would be nothing false or misleading as to what the preparation would do for the user.

But it would be an unfair method of competition and therefore in violation of the law creating the Federal Trade Commission. That is why it was asserted that the trade

commissioners have gone into the question of false and misleading brands and labels. The department of agriculture has never had to consider whether a label or brand was false or misleading in a trade sense, its concern being wholly with regard to the health or pocketbook of the ultimate consumer. The new trade law has to do with the pocketbook of the manufacturer and the conservation of the purse of the man who has a mean, sneaking and unscrupulous competitor, or bunch of competitors. It would be of no interest to the department of agriculture if a Philadelphian called his Philadelphia Scream cheese, even if thereby he damaged some man who might have built up his business by calling his Philadelphia cream cheese. The trade commission, however, would adjust its spectacles and, if it came to the conclusion that that is an unfair method of competition, could condemn the use of a label that would not offend the department of agriculture.

The customary number of food and drugs bills were introduced during the eight days congress was in session before the holidays. The introduction of bills is as easy as borrowing a toothpick at a hotel or a restaurant. That may be one reason why the reformers want to make it easier by grafting the initiative and referendum upon the American system of proposing legislation. Ninety-five per cent of the bills introduced will never be more regarded than last year's baseball scores. Something more than 9,700 bills and 300 or 400 resolutions have been introduced, printed and referred to committees. Referring a bill to a congress committee is accomplished by writing on the back of the original introduced by the member, the initials of the committee to which the messengers carry printed copies. For instance, Senator Pomerene's bill forbidding the use of artificial coloring matter in any of the "edible alimentary (sic) pastes" was endorsed on the back "Mfgs.," meaning that the messenger should carry it to the committee on manufactures, although the proper reference would be to the committee on interstate and foreign commerce because it says it shall be unlawful to manufacture for sale, transportation or use in interstate or foreign commerce, or introduce in any manner in interstate or foreign commerce "an artificially colored spaghetti, macaroni, vermicelli or noodles."

A very large percentage of all bills are the work of cranks and faddists who have so little genuine business of their own that they make a business by devoting their energies making a pretense of regulating that of others. For instance there are about 100 bills forbidding railroads and steamships carrying alcoholic liquors, all of which originated with the professional regulators of other people's lives who have not the courage to father bills making it a misdemeanor or a crime to drink alcoholic beverages.

There are also about 100 bills forbidding the shipment in interstate commerce of the carcasses or parts thereof of calves less than two years old at the time of slaughter. The object, of course, is to force an increase in the supply of beef by making the price of veal absolutely prohibitive for a year or two.

There have been a large number of bills introduced providing an inspection of laboratories in which serums, viruses, toxins and analogous products are manufactured similar to that maintained in packing houses. The proposed service, however, will be under the control of the Public Health Service which is part of the treasury department. The proposed law provides for marking the strength of the toxins, etc., together with a descriptive name. The name and address of the manufacturer and the license number of the establishment are to be shown on the package.

None of these bills is worth an extended notice for the simple reason that none has been placed on a program of legislation to be enacted. None is as yet more important than would be the proposal of the office boys or clerks in a big establishment, prior to endorsement of the proposal by the boss or bosses of the establishment. President Wilson is the boss, Speaker Clark, Senator Simmons and Chairman Kitchin of the ways and means committee are subbosses. None of them has yet considered what shall be done with the proposals of the other 530 members of congress.



Notes from Field of Food Control



A RESOLUTION adopted and passed in the National Association of Marketing Officials, held in Chicago Nov. 29th to Dec. 2nd, reads as follows: "Whereas, we are warned by high authority that 'tubercle bacilli from bovine source must be looked upon as a virus to which public health cannot be exposed with impunity' (26 Ann. Rep. U. S. Bureau of Animal Industry, P. 194); and whereas, milk and milk products are classed by the same authority as active agents in the spread of tuberculosis, typhoid fever, diphtheria, and other infectious diseases; and yet their production and manufacture are not subject to Federal inspection and supervision. Therefore, be it resolved, that the Congress should enact a law subjecting interstate commerce milk and milk products to some adequate Federal inspection and supervision for the protection (a) of the consumer against disease spreading food, and (b) of the state inspected local dairymen against the unfair competition of uninspected interstate dairymen. (Author, Emmet A. Jones, Chief of Markets Bureau, Montgomery, Ala.). Signed, W. G. Scholtz, Pres., Wm. R. Camp, Sec."

* * *

* On Wednesday and Thursday, December 29 and 30, hearings were held by the Illinois Food Commission on the subject of labels and the use of sulphites in fresh meat, respectively. No rulings have been made as yet.

* * *

¶ The sale of horse meat as a commodity will be legal in Greater New York after January 1. As a necessity of life the horse will be placed upon the same footing with cows, sheep and poultry. This action was taken by the Board of Health recently. That city thus becomes the first in the country, so far as known, in which the legal restriction against horse flesh has been removed.

* * *

* The Provident Chemical Works of St. Louis, Mo., announce the purchase by them of the business of the Hygienic Chemical Co. The large plant of the Provident Chemical Works, covering two city blocks, and provided with thoroughly modern equipment, will enable them to take care of this increased business without inconvenience to their old customers. THE AMERICAN FOOD JOURNAL wishes this thriving company a full measure of success in its new undertaking.

* * *

¶ The hearing on the question whether single hams and single sides of bacon which are wrapped or covered with paper, cloth, or gelatin are "in package form" which is to be held in the Bureau of Chemistry, 216 Thirteenth Street, Southwest, Washington, D. C., and which was tentatively set for February 2, 1916, at 2:00 p. m., has been postponed. It is now proposed to hold this hearing on Wednesday, March 8, 1916, at the same place and at the same hour.

* * *

* The following resolution has been adopted by the American Baking Powder Association: One of the objects of the American Baking Powder Association as expressed in its constitution and by-laws is to discourage fraud in the manufacture and sale of making powders. The use of albumen in baking powder is a fraud as it serves no legitimate purpose. Manufacturers who use albumen have done so either to injure the sale of competitive powders by the fraudulent water glass test, or to protect their own product from attack by the same fraudulent test. In either event the use of albumen serves to deceive the dealer and consumer, and to injure reputable brands of baking powder which contain no albumen. Therefore, it is decided by the executive committee after careful consideration of the entire matter, that those members of the association who place albumen in their baking powders shall be and they are hereby expelled from the American Baking Powder Association and are hereby declared ineligible to re-enter the association until such time as they shall make themselves eligible for membership by discontinuing fraud in the conduct of their business.

¶ A hearing on baking powder and its ingredients will be held by the Joint Committee on Definitions and Standards at the Bureau of Chemistry, Washington, D. C., at 10 a. m., on January 14, 1916. At this hearing the trade and all interested parties will be given an opportunity to present to the committee their views as to what should constitute a proper definition or standard for baking powder. The Joint Committee on Definitions and Standards is composed of representatives of the United States Department of Agriculture, the Association of American Dairy, Food and Drug Officials, and the Association of Official Agricultural Chemists. This committee recommends standards and definitions for food and drug products for the guidance of Federal and State officials in the enforcement of food and drug laws.

OUR ANNUAL REVIEWS.

Readers of THE AMERICAN FOOD JOURNAL should not fail to read the annual reviews in the "Wholesale Grocery Field" of this issue. These reviews have been prepared by experts in their respective food specialty lines and carry intimate knowledge which can only be acquired by long years of special study and experience.

THE AMERICAN FOOD JOURNAL has gone to a great deal of pains in order to provide these annual reviews to the readers of this publication, and the only request we have to make in return is that they be carefully read and digested.

ASKS \$20,000 TO FIND DYES.

Department of Agriculture plans for investigations into the utilization of domestic product in dyes manufactures and fiber plants for binder-twine purposes are outlined in data just submitted to Congress by Secretary Houston. The information was given in connection with estimates for appropriations in the next fiscal year for the agricultural service, amounting to \$30,000,000, being \$2,000,000 less than the current year appropriation.

Because of the scarcity of dyestuffs from Germany, an appropriation of \$20,000 is asked for investigation and experiments in the utilization, for coloring, of raw materials grown or produced in the United States.

WHAT IS JAVA COFFEE?

Food Inspection Decision No. 82, which limits the use of the term "Java," under the Food and Drugs Act, to coffee produced on the island of Java, will not be changed, according to a forthcoming issue of the Service and Regulatory Announcements of the Bureau of Chemistry. Certain members of the coffee trade requested the Bureau of Chemistry to recommend the modification of Food Inspection Decision No. 82 to the extent of allowing coffee produced on the island of Sumatra, or other islands of the Dutch East Indies, to be imported and shipped into interstate commerce as Java coffee. It was claimed by the trade that the coffee produced on the island of Sumatra is equal, or superior, in quality to that produced on the island of Java. The Food and Drugs Act provides that any food or drug product shall be deemed to be misbranded which is falsely branded as to the state, territory, or country in which it is manufactured or produced. The Bureau of Chemistry, therefore, is of the opinion that, under the terms of the Food and Drugs Act, even if the coffee produced on the island of Sumatra is equal, or superior, to that produced on the island of Java, it cannot be imported into this country or shipped into interstate commerce labeled as Java coffee. The Service and Regulatory announcement follows: "At a hearing held on June 5, 1915, the Bureau of Chemistry was requested to recommend to the Secretary of Agriculture a modification or revocation of Food Inspection Decision No. 82. Representations made at this hearing and those communicated to the Bureau by correspondence have been considered. The request is denied."

TRAFFIC IN WATER-SOAKED OYSTERS.

Inspectors of the Department of Agriculture in giving special attention to the heavy traffic in oysters during the holiday season have found that it is the practice of some dealers to add fresh water to shucked oysters in such a way as to greatly increase the size of the oysters. The oyster when brought in contact with fresh water for several hours will "drink" or absorb a considerable quantity of the water and will increase in size in exact proportion to the amount of water which it "drinks." As oysters are usually sold by the pint or quart, any increase in their size due to the addition of water enables the dealer to fill the pint or quart measure with a smaller number of oysters. In order to increase the size, oysters must be soaked in fresh water or water that is only slightly salty. They will not "drink" enough of the salt water in which they are grown to increase materially in bulk. Nor will oysters increase in bulk to any extent from being washed in fresh water if they are allowed to remain for only the few minutes necessary to cleanse them.

If four quarts of oysters and one quart of fresh water are placed in a five-quart container and the mixture allowed to stand for several hours, there will be a marked change in the appearance of the contents of the container. To the naked eye there will appear to be five quarts of dry oysters, for the container will be full and there will be little or no water in sight, it being on the inside of the plump, succulent looking oysters. The average purchaser has no means of detecting the addition of water. The chemist, however, by determining the amount of water in the oyster and comparing it with the amount that an oyster normally contains, can readily detect the adulteration.

The practice of increasing the bulk by the addition of water is not confined to shucked oysters. Some dealers float the oysters for several hours while yet in the shell in fresh water or water that is much less salty than the water in which the oysters were grown.

During the process of floating, the oysters "drink" in the fresh water and increase in weight and bulk in exact proportion to the amount of water they drink or absorb, and thus a medium sized oyster may be increased to the size of a "select."

The addition of water to oysters lowers their food value, and such oysters are adulterated under Section Seven of the Food and Drugs Act, which provides that food is adulterated if a "substance has been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength," and also if "a substance has been substituted in whole or in part for the article." The shipment of such oysters in interstate commerce or their sale in the District of Columbia or the territories of the United States, constitutes in the Department's opinion a violation of the Food and Drugs Act.

It is believed that increasing profits by selling water at the price of oysters is not countenanced by the better element of oyster dealers, who desire to have the practice stopped both because it is fraudulent and because it places the honest dealer at a disadvantage in selling his product at the price of the adulterated one. The Oyster Growers' and Dealers' Association of North America is co-operating with the Department of Agriculture in stopping interstate traffic in oysters adulterated in this manner. State officials are also co-operating in order to stop the fraudulent practice within their States.

Considerable evidence is being collected by the inspectors of the Department of Agriculture in reference to this traffic, and as soon as the evidence is complete prosecutions against those dealers who are violating the Food and Drugs Act will be recommended to the Department of Justice.

WHOLESOMENESS OF SAUER KRAUT.

In a recent interview with Dr. John Dill Robertson, Health Commissioner of Chicago, this official said:

"It is not generally known that sauer kraut is among the most ancient foods of Europe. Centuries ago it was made in Germany, where the peasants put it up in old wine casks

and similar containers. In the Russias, likewise, the use of sauer kraut runs back far beyond the memory of man.

"The mode of curing the cabbage was much the same in both countries, but in Russia the kraut was preserved in pits in the ground for winter consumption.

"It stands to reason that in those distant ages the manner of processing and handling this product was extremely crude and primitive. The farmer went about his task with tools of his own making, chopped up his cabbage, processed it to the best of his 'knowledge and belief' and called the result 'kraut.'

"Perhaps in no other single instance can the stamp of modern progress be more clearly felt and seen than in the development of the sauer kraut industry.

"Today there are special machines for shredding the cabbage into long thin strips and the curing is now done in large vats or tanks, with extreme precautions taken as to the cleanliness and general sanitary conditions surrounding the manufacture of the product.

"After tanking or curing the cabbage, in other words, after the cabbage has become kraut, it is packed in barrels or kegs. It is also put up in No. 3 and No. 10 tins, which are hermetically sealed, this treatment insuring sanitary conditions and absolute retention of the natural flavor until the tins are opened.

"These packages are sold at surprisingly reasonable prices. It is generally accepted the world over, among dietitians, that sauer kraut is one of the most valuable products of the vegetable kingdom in wholesomeness and appetizing quality. The acidity of the fermented cabbage acts in conjunction with the acid of the stomach, in this manner aiding and stimulating digestion.

"It is a well known fact that many people who cannot eat plain boiled cabbage without subsequent distress, may eat sauer kraut with perfect impunity.

"The United States today manufactures sauer kraut equal in quality to that of either Germany or Holland.

"No expense has been spared in the perfecting of American processes, many manufacturers having gone so far as to import kraut experts from Europe. By means of experiments and by a gradual attainment of experience, American sauer kraut has reached a point of perfection excelled by that of no other country in the world.

"It may be said, furthermore, that as a food it is the cheapest product on the market, a single quart, or No. 3 can, containing sufficient for a family of five or six persons."

NEW ORGANIZATION FORMED.

One of the most important organizations in this state was effected on Monday, December 13th, when nineteen of the largest as well as oldest manufacturers of ice cream met at the Hermitage Hotel in Nashville and organized the Tennessee Ice Cream Manufacturers' Association.

This meeting was called by the manufacturers in Nashville, and the State Food and Drug Commissioner, and was attended by representatives of the ice cream interests of Memphis, Chattanooga, Knoxville, Jellico, Pulaski and all the manufacturers in Nashville.

The first business after organizing was the election of the following board of directors:

W. M. Sidebottom, Geo. Decker and W. E. Drake, all of Nashville; H. G. Dutlinger, O. C. Black, Memphis; Geo. K. Brown, W. C. Denton, Chattanooga; J. R. Kuhlman, Carlton Carns, Knoxville; S. A. Smithson, Pulaski; F. W. Harkness, Jellico.

This board of directors elected the following officers:

W. M. Sidebottom, Nashville, president.
H. G. Dutlinger, Memphis, first vice-president.
Geo. K. Brown, Chattanooga, second vice-president.
J. R. Kuhlman, Knoxville, third vice-president.
Geo. A. Decker, Nashville, secretary and treasurer.

There were many important questions presented. Probably the most important ones settled were that the standard of purity and the sanitary conditions under which ice cream is being manufactured shall be raised throughout the whole state.

Some Food and Drug Frauds in Kansas

IT may be said at the outset that many of the old adulterants have disappeared and some new ones have taken their place. The Drug Laboratory of the University of Kansas has had to examine not only drugs proper, but also food accessories such as spices, coffee, also linseed oil and such other material as would come within the scope of a laboratory equipped such as is found at the University of Kansas.

The more common adulterants found within the past year may be summarized as follows:

COFFEE AND SPICES.

NAME.	ADULTERANT.
Powdered Mustard	Wild mustard or charlock (<i>Brassica Sinapistrum</i>), wheat flour.
Powdered Ginger	Extracted ginger.
Ground Coffee	Chicory, coloring matter.
Pepper	Pepper shells, <i>Piper Longum</i> substituted for <i>Piper Nigrum</i> .

VOLATILE OILS.

Oil of Sassafras	Oil of Camphor.
Oil of Wintergreen	Methyl salicylate, and oil of birch.
Oil of Birch	Methyl salicylate.
Oil of Sandalwood	West Indian, <i>Amyris Balsamifera</i> .

FIXED OILS.

Olive Oil	Cottonseed Oil. Corn oil.
Linseed Oil	Mineral oil.
Cod Liver Oil	Other fish oils and seal oil.

SPIRITS.

Spirit of Camphor	Added water. Low camphor content.
Spirit of Peppermint (may be in the oil)	Added water. Low oil content.

TINCTURES.

Tincture of Ginger	Capsicum, added water, low per cent of extractive.
Tincture of Asafoetida	Low extractive due to use of adulterated asafoetida. Asafoetida itself frequently contains less than the required 50% alcohol matter.
Tincture Iodin	Wood alcohol (KI absent).

MISCELLANEOUS.

Potassium nitrate	Sodium chloride.
Turpentine	Wood turpentine, mineral oil.
Hair tonics	Wood alcohol.
Hydrogen peroxide	Barium, sulphates, arsenic, low peroxide content.
Beeswax	Paraffin.
Bay Rum	Low in oil.
Sweet spirit of nitre	Low ethyl nitrite content. Exceeds acidity.
Pepsin preparations	Little or no digestive value.
Ammonia water	Low in ammonia content.
Lime water	Low in calcium oxide content.
Buchu	Twigs, grass, stems.
Soft soap	High alkalinity.
Oil Lavender Flowers	Heavy oil of camphor.
5 gr. Aspirin tablets	Under weight.
Acetanilid tablets	Under weight.
Adeps Lanae	Sulphur compounds.
Caffeine citrate tablets . . .	Under weight.
Infusorial earth	Contains carbonates and other soluble matters.
Oil of Cloves	Alcohol.
Oil of Peppermint	Alcohol.
Sodium phosphate	Excess of arsenic.
Sodium salicylate tablets . . .	Less than declared amount of sodium salicylate.
Spirit of Ammonia	Aromatic spirit of ammonia or ammonia water dispensed instead.
Tartaric acid	Exceeds limit of lead.
Potassium bitartrate	Exceeds limit of lead.

It may be well to state in this connection that in regard

to Spirit of Peppermint it has been found in some cases that the fault did not lie with the retailer who manufactures the spirit, but in the oil from which the spirit of peppermint was made, it being, in some cases, of low oil content.

The Oil of Wintergreen has caused no little discussion as to the question of its value as compared with a pure article of methyl salicylate. The writer's opinion is that absolutely pure methyl salicylate is the essential constituent of oil of wintergreen and the other ingredients of the natural oil are valueless from a therapeutical point of view. But the extraneous material which exists in the natural oil is tolerably constant and fortunately sufficient to identify the natural oil as distinct from the synthetic. Mr. G. N. Watson has published a valuable test* which seems to be very satisfactory for the purpose of distinguishing between the natural and synthetic oil. We have noticed that the United States Government has prosecuted some cases where the adulteration was found. For example, No. 3597, in which the adulterated product was alleged for the reason that it consisted wholly or in part of methyl salicylate (not characteristic of wintergreen leaf oil, of which there was only a trace). This was considered to be a reduction and a lowering of the quality and strength of this article. It matters not whether the therapeutic value of the one is as good as the other, the point that the administrators should always uphold is that an article should represent exactly what the label states it to be.

Coumarin has been found adulterated with acetanilid. In one case the adulteration was found in one pound can to be approximately 46% of acetanilid (F. I. D. No. 6531).

The Federal decisions in conforming with the Shirley Act have thrown some light as to what may be considered as false and misleading statements on containers, labels and advertisements of proprietary and patent medicine. This question of false statements, the state of Kansas will soon be obliged to face in its execution of a law recently enacted (Senate Bill No. 229.) This law makes it a criminal offense to publish or circulate in the state, whether by newspaper, label or advertisement, any assertion or statement which is in fact untrue, deceptive or misleading. The writer hopes that the Kansas Board of Health will pursue a line of constructive reform in this particular and he believes that it

*See Jour. Amer. Pharm. Assn., Dec., 1914, p. 1658 (Sayre and Watson).

will have the majority of the pharmacy profession supporting this and he believes that the best way to secure the earnest support of the profession which shall be so seriously affected is that first an educational campaign be carried on and then a gradual and permanent crusade be made against the practice which has been so long borne and winked at by the public as well as the profession. It goes without saying that the medical profession will support the pharmacists in every attempt that they will make to assist the Board in this direction. The Federal decisions which have borne upon this subject of recent date I should like to quote as examples, selecting three of the many cases.

1.

KOPP'S "BABY'S FRIEND."

Label: "Kopp's Baby's Friend contains about eight and one-half per cent (by volume) alcohol and $\frac{1}{8}$ grain sulphate of morphine in each fluid ounce besides other medicinal ingredients. The Kopp's 'Baby's Friend' Co., successors to Mrs. J. A. Kopp, York, Pa., U. S. A. Directions: **. For further directions read accompanying Circular. Shake well before using. Guaranteed by the M'fr's to comply with Food and Drugs Act, June 30, 1906. Serial No. guaranty 113."

Charge: Misbranded; the name of the product as well as other statements on the labels and cartons are false and misleading in that the ingredient, morphine, contained in the preparation, is not a baby's friend, nor is it a safe remedy, beneficial and effective, nor a wonderful cure for babies when used indiscriminately; the therapeutic claims are false, misleading and fraudulent, as the product contains no ingredient

nor combination of ingredients capable of producing the effects claimed.

2.

COE'S COUGH BALSAM.

Label: "Coe's Cough Balsam. Each fluid ounce of Coe's Cough Balsam contains .12 of one grain of opium and 10% of alcohol. For Coughs, Croup, Whooping Cough, Quinsy, Asthma, Colds, Tickling of the Throat, Hoarseness, Catarrh and Consumption. The C. C. Clark Co., etc."

Charge: Misbranded in that the product contains no ingredient nor combination of ingredients capable of producing certain of the therapeutic effects claimed. The opium contained in the product is improperly declared as to quantity and position.

3.

DE WITT'S ECLECTIC CURE.

Label: "De Witt's Eclectic Cure. Each fluid ounce contains alcohol 75%, ether 25 min., opium, 1 gr. 10 drs. or over. Guaranteed by the W. J. Parker Co. under food and drugs act, June 30, 1906, etc. (on bottle).

(On carton): "An internal and external remedy for cholera, cholera morbus, diarrhoea, dyspepsia, rheumatism * * * scarlet fever. * * * The greatest cholera remedy in the world." * * *

Charge: Misbranded in that many of the statements on the labels and circulars are false, misleading and fraudulent, as the product contains no ingredient or ingredients capable of producing the physiological effects claimed.

It is evident that the problem of the pharmacist in the near future will be to decide what will constitute a false or misleading statement in connection with proprietary and patent medicines. It may be difficult to draw a sharp line between fact and false or misleading statements. It is evident that there are some statements made on circulars and labels which are plainly of the latter class. The British Pharmaceutical Conference has enumerated some of these statements as follows: "The best remedy for consumption"; "Cures Bright's disease"; "It never fails to cure cancerous ulcers, syphilis, piles, rheumatism, gout, dropsy"; "Bright's disease, stone in the bladder, dropsy, eczema, scrofula, can be speedily cured"; "The absolute specific for all or some of their phases of syphilis, and every form of venereal disease"; "Applied freely will cure lumbago or sciatica in one night," etc., etc.

It will be the desire of the Kansas laboratory to co-operate with pharmacists to eliminate this class of statements so that the reform in this direction will be gradual and effective.

PRODUCTION OF CHINESE EGGS.

According to the invoice statistics of this consulate general, there were exported from Shanghai during the first three months of the present year 410,760 dozen Chinese eggs, value \$64,027. They were shipped to San Francisco, Seattle, Portland, and other Pacific coast ports. The total egg shipments from Shanghai to the United States during the first quarter of 1914 were 1,818,737 dozen, valued at \$305,710. The entire total for 1914 shipped to our Pacific seaboard from Shanghai was 3,600,000 dozen, value \$540,000. The withdrawal of many merchant vessels from service, incidental to conditions arising from the war, has resulted in a decided decline in egg exports, as will be noted from the figures quoted.

Those eggs obtained from brown Leghorn hens are generally considered most desirable to export, chiefly on account of their larger size and weight. These eggs are principally intended for use by bakery and confectionery manufacturers abroad. Most of these eggs are obtained from northern Kiangsu Province, the chief producing center in that vicinity being Tungchow. The cities of Chinkiang and Yangchow, in Kiangsu Province, and Wuhu, in Anhui Province, are also large contributors, in addition to other regions in the Yangtze Valley.

Freight Rates to America.—The egg supply is most plentiful in the spring and summer seasons, but the summer heat

being so severe in this section of China, egg shipments are generally curtailed during this period. The majority of shipments have been made via the northern route to Vancouver and Seattle, partly on account of quick transit and also because the northern route obviates the necessity for refrigeration, at least during the colder months. The freight rate to Pacific coast ports via the regular lines is \$8 per ton (17 cases of eggs to the ton). Refrigerator space costs \$16 a ton. It is claimed that the eggs arrive in the United States in a satisfactory condition.

For many years past China has been exporting eggs to Japan, Russia, Siberia, Hongkong, the Philippines, and other points in the Far East. It is only since the new tariff act of 1913 became effective that the shipments to the United States have reached noticeable proportions.

No Chicken Farms; Gathering and Packing Eggs.—The so-called egg or chicken farm does not apparently exist in China on an extensive scale. In a sense the production of eggs is often considered to be somewhat incidental to the other principal agricultural activities of the Chinese farmer. Even so, sufficient quantities are found available for export.

The conditions under which the eggs are obtained are, apparently, satisfactory. The chickens are fed principally on rice. The daily wage of a Chinese farmhand amounts to, approximately, 10 cents.

The eggs are purchased by agents of the Shanghai retail produce merchants, who visit the farming localities at regular intervals. The eggs are then transported to Shanghai by rail, canal, or river shipments. The farmer generally sells his eggs at about \$4.60 per thousand, the price varying according to supply and demand. The transportation charges are usually defrayed by the Shanghai merchant, who resells the eggs to local exporters at \$6.25 to \$8 per thousand. This price also fluctuates, but these figures are approximate. The exporter in turn sells the eggs to his clients abroad at prices mutually arranged for either by contract or agreement. The costs of crating, packing, insurance, freight, etc., are usually borne by the exporter.

The smaller variety of fresh eggs are not so greatly in demand for export. However, they are used for other commercial purposes; the yolks being extracted, chemically preserved, and packed into barrels for shipment to the United States and Europe, where they are used in tanning leather, etc. Liquid and dried egg albumen is also exported in large quantities from various parts of China, the chief manufacturing and shipping center being the city of Hankow.

Egg Exports from Nanking.—With reference to our report in Consular and Trade Reports for March 2, 1914, regarding the egg industry at Nanking, the following additional information is submitted as of interest to egg dealers:

Eggs are purchased by the local exporters here at 40 to 42 cents per gross, and are being consigned to the United States as follows: Fresh eggs, to San Francisco, 102,000 dozen, at \$0.046; Seattle, 311,000 dozen, at \$0.046; Tacoma, 521,833 dozen, at \$0.046. Eggs frozen, in tins, to New York City, 7,523,318 pounds, at \$0.03; Seattle, 656,000 pounds, at \$0.03.

The rate of exchange and supply may ultimately cause some variation in the cost. Thus far, however, the exporters have experienced no difficulty in securing all they can handle—about 25,000 dozen per day. It is said that the territory covered by their agents radiating from Nanking produces 75,000 dozen eggs daily for export. These British manufacturers refused to consider shipping to the United States before the European war, and it is believed that as soon as possible they will revert to their Liverpool market.

There are no native poultry or egg specialists in this district who cater to patrons of the industry. The eggs which are placed upon the market are collected by agents of the exporters at the numerous small towns and markets in the hinterland along the various trade routes and gathered from house to house in the country districts and shipped to the local factory for sorting and preparation for export. The chickens are well fed with grains, and pick up their food very much under the same conditions as do the chickens on the farms in the United States.

Fishing Industry of the United States

In the Fisheries of This Country Each Year Shows an Increased Aggregate Output with Increased Income to the Fishermen Dependent on Various Factors — Knowledge of Fish Resources Essential to All Americans

By H. M. SMITH, COMMISSIONER OF FISHERIES

(Continued from previous issue.)

THE Ohio State Fish Commission having arranged to cover all available territory in a search for lake-herring eggs, the Bureau made no attempt to take up that work. Moreover, in view of the enormous collections of whitefish eggs, there would have been no room for lake-herring eggs had any been secured.

Only fair results were attained in the pike-perch work on Lake Erie. No severe storms occurred in the course of the spawning season, which extended from April 7 to May 7, but a succession of gales in several of the fields prevented the installation of the fishermen's nets until the season was well advanced. Especially was this true at Port Clinton, ordinarily one of the most prolific sections. The more favorable weather conditions prevailing in other portions of the lake resulted in large catches of fish, but a large percentage of them were unripe. The work at Port Clinton was not hampered by this difficulty, and the collections there were more than twice as large as in all the other fields combined. The aggregate take from all sources was 592,000,000. The output included 296,625,000 green eggs, 47,100,000 eyed eggs, and 69,600,000 fry, about half of which were utilized in filling applications from neighboring States. The remainder were returned to the spawning grounds in Lake Erie.

The hatchery at Cape Vincent, N. Y., was, as usual, supplied with eggs of the commercial fishes shipped from other Great Lakes stations. The output resulting from such shipments comprised 27,000,000 whitefish, 3,572,000 lake trout, and 9,700,000 pike-perch fry, which were liberated in Lake Ontario waters. Attempts made during the season to secure eggs from the various commercial fisheries on Lake Ontario resulted in failure so far as whitefish and lake herring were concerned, but 128,000 lake-trout eggs of fair quality were collected and hatched. The small substation recently established for the collection of pike-perch eggs could not be operated owing to lack of funds.

The Cape Vincent station, owing to its unsuitable location with reference to the sources of egg supply, has practically been a failure. Since its establishment in 1896 the station has simply served as a receiving depot for the development of eggs shipped from other stations. Under instructions from the Secretary, investigations are being made to ascertain if a desirable site can be secured on the shore of Lake Ontario where successful operations can be conducted with the commercial fishes of that region and in connection with which the propagation of pond species also can be undertaken. This will necessitate the acquirement of from 15 to 20 acres of land supplied with a gravity flow of water. In 1908 an appropriation of \$7,000 was provided for the purchase of land and construction of a superintendent's residence, ponds, etc., at Cape Vincent, but this money has never been used, and as it is the intention to ask Congress for authority to dispose of the present property when a more desirable site can be found the return of the special appropriation to the Treasury is recommended.

The anadromous fishes of the Atlantic seaboard are handled at two stations in the Chesapeake Basin and two in the Albemarle region, and the principal species handled are shad, striped bass, white perch, and yellow perch.

The run of shad in Chesapeake Bay and tributary streams in the spring of 1914 was smaller than in any previous season within the 35 years covering the Bureau's operations with this species, and the fish-cultural results were correspondingly meager.

On the Susquehanna River preparations were made to cover every field within range of the Battery station where there was a possibility of securing shad eggs by establishing lay-boat patrols in the vicinity of the gill-net operations and detailing experienced spawn takers on the seining shores. The season was a failure, and the total output of shad fry was less than 2,000,000, whereas the efforts put forth and the money expended should have yielded not less than 100,000,000.

As the supply of white perch and yellow perch in the upper part of Chesapeake Bay appears to be increasing, the work

with these species was conducted on only a limited scale. Between March 26 and 30, 1914, eggs of the yellow perch numbering 80,762,000 were secured, which yielded 57,400,000 fry and 9,000,000 eyed eggs for shipment to State and private hatcheries. Unusually low temperatures in this river delayed the spawning season of the white perch for about 10 days, but 310,225,000 eggs of that species were collected during the latter half of April and the month of May, producing 218,600,000 fry and 1,450,000 eyed eggs for shipment to New England. In conjunction with the other work, 450,000 alewife eggs were developed as an experiment in the McDonald hatching jars, and from them 184,000 fry were obtained.

On the Potomac River, where the collecting of yellow perch usually starts in February, this work could not be undertaken until the middle of March, owing to the fact that the river was blocked with ice, and the rapidly rising temperatures after that date made it exceedingly difficult to secure sufficient brood fish to produce the usual stock of eggs for the Bryans Point hatchery. However, by constant and persistent effort 15,567 yellow perch had been taken from the fishermen's nets and placed in live cars by March 27, and from them 129,155,000 eggs were obtained. The output for the season was 3,900,000 eyed eggs and 110,224,389 fry, which were distributed in various tributaries of the Potomac River in Maryland and Virginia.

From a financial standpoint the shad season on this river was the poorest ever experienced. None of the commercial fishermen operating haul seines within range of the Bureau's station were able to make expenses, and the catch of fish by the gill-net fishermen was far below the average. Egg collections were made from April 23 to May 20, when the work was discontinued on account of scarcity of fish. The season's work comprised 30,180,000 eggs collected, 27,088,060 hatched, and 611,000 eyed eggs shipped.

In the Albemarle Sound region, where for the past five years the good results of shad propagation and protection have been manifested by a steady and appreciable increase in the annual output of the Edenton station, the work received a check, the output of young shad being only about one-third that of 1913. The poor results may be attributed to several causes, chief among them being the unfavorable weather, which, during the entire spawning season, was too cold to permit of the normal ripening of a large percentage of the fish in the streams. Another unfavorable feature was the unusual scarcity of ripe male fish. At times as many as 100 females with ripe eggs were taken, with only one mature male available, making it necessary to discard eggs in large numbers. The reports received from the lower portion of Albemarle Sound indicated that shad were there in the usual numbers, and it is believed that this setback is only temporary. The total collections of eggs for the Edenton station were 42,885,000, and 29,423,000 fry were the output therefrom.

The hatching facilities of the station were increased during the year by the construction of a new iron-pipe water-supply and drainage system, and the installation of additional hatching tables with a capacity for 200 jars.

Owing to peculiar climatic conditions, the normal spawning season of the striped bass on the Roanoke River, near Weldon, N. C., was prolonged for nearly a month. When egg collections began on April 29 the outlook was discouraging, the catch of fish was small, the river was at a low stage and very clear, and the water was warming so rapidly that numbers of female bass were unduly ripening and casting their eggs in the river many miles below the station. A few days later, following a heavy rain, all these conditions were reversed. The water level in the river was increased over 5 feet, its temperature dropped to normal, and fish with eggs were taken in comparatively large numbers in the vicinity of the various egg-collecting camps. The majority of them were green, however, and male fish, as heretofore, were scarce. At the height of the spawning season (May 12 and 13, over 5,000,000 eggs were taken, and from that time on smaller lots were secured up to May 22, by which date the river was so low and the water so clear that the fish were able to see and avoid

the nets. The total egg receipts amounted to 17,290,000 and the output of fry to 11,689,000.

Some penning experiments with the crude facilities at hand were conducted in the course of the spawning season in an effort to solve the greatest problem connected with the artificial propagation of the striped bass—the taking of ripe male and female fish at the same time. Though no positive information on the subject was gained, the results of these experiments gave ground for the belief that under certain conditions the ripening of green fish of both sexes in pens may be successfully accomplished.

The hatching of marine fishes and the lobster is done at three stations in Massachusetts and Maine, but the field work for the collection of eggs extends from the Bay of Fundy to Long Island Sound.

The results of the year's operations at the Boothbay Harbor station, though somewhat smaller than had been anticipated in view of the large stock of brood lobsters impounded early in the year, were the largest ever attained on the Maine coast, the number of fry hatched and distributed aggregating 755,557,400.

During the summer and fall of 1913 brood lobsters were so plentiful that 20,349 were collected without difficulty before October, this being more than 3,000 in excess of the number obtained in previous years, even when collections were continued through practically the whole year. It was deemed inadvisable to place more than this number of lobsters in the pound, and as facilities for holding additional stock could not be provided, the collections were discontinued on September 30. On the removal of the lobsters from the pound in April, it was apparent, both from the heavy shrinkage in numbers and from the small crop of eggs carried by the bulk of the females, that too many lobsters had been placed in the inclosure. Only 14,537 survived, the percentage being smaller than in any year since the enlargement of the pound in 1908. The yield of eggs amounted to 150,014,000, or 10,319 per lobster, as opposed to an average of 15,500 in the fiscal year 1913. In the course of the spring 27,642,000 eggs were secured from freshly caught lobsters, and from the total stock 173,500,000 vigorous fry were hatched and distributed.

In order to relieve the crowded condition of the Gloucester hatchery, the steamer *Gannet* was utilized during the early winter in transferring surplus pollock eggs from that point to the Boothbay Harbor station, some of them being carried in scrim boxes in the lobster tank of the vessel and some in transportation cans. While the final results—a total output of 19,233,422 fry from the 88,600,000 eggs handled—would not seem to justify further operations along similar lines, it is believed the experience gained as to the most practicable methods of handling and transferring the eggs will make it possible to prosecute the work on a better basis another season.

Encouraged by the outcome of the haddock operations of the past two years, preparations were made for the propagation of this species on an extensive scale. The season was, however, a failure. Practically no brood haddock were seen, though small immature fish were abundant, and some very good hauls of that size were made by the fishermen. Numerous trips to the fishing grounds in quest of eggs terminated in a total collection of 6,178,000 of very poor quality. From them 894,000 fry were hatched and distributed.

The cod operations at Boothbay Harbor were likewise unsuccessful and for similar reasons. Spawning fish were very scarce on the fishing grounds within reach of the station, and the catch of cod of other sizes was so small as to be unprofitable to the few fishermen conducting operations. The season closed with a total collection of 10,523,000 eggs, which yielded 5,859,000 fry.

In the past years considerable numbers of brood flatfish have been turned over to the Bureau by the cod and haddock fishermen on the Maine coast. Owing to the limited extent of these fisheries the past season no flatfish from that source were available, and the 4,852 spawners constituting the station's brood stock were secured from nets installed and operated by the station force in coves adjacent to Boothbay Harbor and Linekin Bay. Some of the fish were permitted to spawn naturally in the tables, but owing to lack of sufficient table room the greater part were stripped and the eggs artificially fertilized. No difference in results was discernible: the 607,785,900 eggs handled were of uniformly fine quality, and the losses in hatching amounted to only 9 per cent. There being more eggs on hand at the height of the season than could be properly cared for with the available hatching facilities, 100,000,000 were developed in a 10-foot box, which had been divided into five compartments, provided with a scrim lining and scrim bottom, and anchored at the head of the wharf where there was sufficient wave motion to

secure a good water circulation through the bottom and the perforated sides of the box. While these eggs developed more slowly than those in the hatchery, owing to difference in water temperature, they hatched just as well and produced fry of excellent quality.

Extensive repairs and improvements, increasing the capacity of the Gloucester hatchery by about 65 per cent, were completed during the early part of the year, and from the opening of the pollock spawning season in November to the end of the fiscal year the station force was constantly occupied in the propagation and distribution of one or more of the five species handled. The total egg collections and the output of fry were the largest in the history of the station, notwithstanding the shortage which occurred in the cod work.

In the prosecution of pollock hatching the schooner *Grampus* was utilized as living quarters for the spawntakers in the field, while the eggs collected were transferred daily from the fishing grounds to the station by the steamer *Blue Wing*. In its early stages the work was not profitable, the collections being small and the eggs inferior in quality. Later, however, their quality improved, and during December the results exceeded all expectations, the daily collections of eggs running from 25,000,000 to 50,000,000. Notwithstanding the increased facilities the hatchery was filled to overflowing, and on several occasions it became necessary to plant some of the older eggs to make room for the enormous incoming collections. The spawning season extended from November 1 to February 6, and resulted in the collection of 974,240,000 eggs. The output included 542,185,000 fry and 116,285,000 eyed eggs transferred to other stations and planted in Gloucester Harbor.

While the collections of cod eggs for the Gloucester station were considerably smaller than those of the previous year, owing principally to the nonappearance of the usual spring run of cod to the inshore fishing grounds in Massachusetts and Ipswich Bays, the number of eggs secured was much larger than the small catch of fish seemed to warrant. During the spawning season—extending from February 1 to April 15—the work was interfered with to some extent by storms, and early in March it became necessary to detach part of the spawn taking force for the collection of haddock eggs. The receipt of eggs for the season aggregated 91,980,000, and the output of fry amounted to 64,780,000.

Between March 17 and April 18 the spawn takers attached to the Gloucester station collected 206,890,000 haddock eggs from the large gill-net steamers operating on the near-by fishing grounds. The eggs were of fairly good quality, but as hatching operations with the cod and flatfish were in progress, it was necessary to crowd them somewhat in the hatching boxes, thus detracting from the results. One lot of 8,590,000 eggs for which there was no room in the hatchery was planted in the harbor near the station, and from the remaining eggs 107,690,000 fry were hatched and distributed.

The flatfish work was attended by more than the average success. From fyke nets set in Gloucester Harbor and fished daily by the station employes from February 24 to April 15, 563 gravid fish were secured, which yielded 275,350,000 eggs. Lack of the usual hatching facilities necessitated the development of a large percentage of these eggs in scrim floating boxes moored in the harbor near the hatchery. The output of fry for the season numbered 242,010,000.

Of 348 egg-bearing lobsters placed in live cars at the station during the fall of 1913, 264 survived confinement and yielded 3,124,000 eggs when stripped early in May. These were hatched in conjunction with 974,000 eggs taken from lobsters delivered at the station during the spring months, and the results in fry distributed amounted to 2,700,000 at the close of the year, with 1,098,000 eggs still in process of incubation.

Notwithstanding the intense severity of the winter and the nonappearance of the usual run of cod on the spawning grounds in Massachusetts fields, a substantial increase over last year in the collection of cod eggs for the Woods Hole station was realized. In November and December brood cod to the number of 3,127 were purchased from commercial fishermen and allowed to ripen in the spawning pool at the station, the capacity of which had been enlarged during the summer and fall. The total yield of eggs from this source was 259,366,000. Late in November the steamer *Phalarope*, with a crew of five spawn takers, was stationed near Sagamore, Mass., for the collection of eggs from the cod fishermen operating in that field. Owing to the climatic conditions encountered, however, only 5,276,000 were secured, and on January 9 the field work was abandoned. In the course of the season 4,130,000 eggs were transferred to the Gloucester station, and from the remaining stock 182,312,000 cod fry were hatched and liberated in the coastal waters of Massachusetts.

(To be continued.)

THE WHOLESALE GROCERY FIELD

ALL THE MANUFACTURING AND JOBBING NEWS WORTH PRINTING

ANNUAL CANNED FOODS REVIEW.

By Canticle.

AT THE beginning of 1915 there existed about the most depressed condition in the canned foods market ever known since the industry assumed a status of any commercial importance.

Prices were below cost of production on the important staples and there was a surplus or carry-over in corn, peas and tomatoes, the three most important staples.

Canners and their trade paper mouthpieces merely crying aloud warnings to members of the industry to restrict or cut down the acreage and reduce the output or accept the consequences of great loss.

Unlike all other food supplies, canned foods, with the exception of pork and beans and canned meats, had not been affected by the war in Europe and no export demand had appeared for any but the articles mentioned.

Some demand for canned milk from abroad had developed but could not be supplied as our home demand was more than absorbing our entire production.

Even canned salmon, always regarded as an ideal army ration, did not seem to be in any request for export.

The canners through their association began to look for an outlet to Central and South America for our canned foods, but soon found that duties exacted by those countries were absolutely prohibitive and that Argentine, Brazil, and possibly one or two other countries were supplying their own needs through local canneries which were in active and successful operation under such conditions of tariff protection as rendered competition impossible.

The uncertainties of commercial conditions were so pronounced that retail grocers largely refrained from buying canned foods for future delivery from wholesale grocers and they, in their turn, bought but few goods from the canners for future delivery.

This situation depressed prices still further and the situation at last became intolerable.

A rumor was started that the corn canners had agreed personally among themselves to heavily reduce their acreage for 1915. No one believed it.

It was also told that pea canners had positively become disgusted in doing business at a loss and that many of them would retire from business and would not operate their canneries during 1915. Fortunately for all parties, this was not believed, for the canners even under the depressing conditions proceeded to can the largest output ever produced, and if wholesalers had believed the rumors of a restricted pack and had bought futures heavily, heaven only knows how many peas the canners would have produced.

Canned tomatoes now selling as low as 65c cannery for No. 3 standard quality when it is claimed that it costs under favorable conditions 72½c to produce them.

The market continued in this situation until about August 1, 1915, when the bad, wet, cold and altogether unpropitious season began to attract the attention of large buyers and they commenced to buy up the surplus or carry-over of tomatoes and corn.

Then came positive information of a heavy prospective failure in the crop of tomatoes and reduced output of canned tomatoes, tomatoes began to advance and a listless market

changed to an active market. The speculative appreciation extended to canned corn and the cheaper grades of canned peas and bargains of the 1914 pack were eagerly sought and bought. Retail grocers caught the speculative infection and their buying reinforced that of the wholesale grocers, and prices for canned tomatoes went gradually but surely and without a step backward from 65c cannery for standard threes f. o. b. Maryland to \$1 cannery in that state, the price at the time of writing this article.

Canned Tomatoes.—A tremendous reduction in the output of canned tomatoes is the announced result of the 1915 pack as follows:

Output of Canned Tomatoes in United States.

For the year 1908, cases of 2 doz. No. 3.....	11,479,000
For the year 1909, cases of 2 doz. No. 3.....	10,984,000
For the year 1910, cases of 2 doz. No. 3.....	9,235,000
For the year 1911, cases of 2 doz. No. 3.....	9,749,000
For the year 1912, cases of 2 doz. No. 3.....	14,022,000
For the year 1913, cases of 2 doz. No. 3.....	14,206,000
For the year 1914, cases of 2 doz. No. 3.....	15,222,000
For the year 1915, cases of 2 doz. No. 3.....	8,400,000

It will be noted from the above figures that there was a reduction in the output of canned tomatoes of about 55 per cent from the pack of 1914 and that the average annual output of canned tomatoes in the United States for five previous years—1910, 1911, 1912, 1913 and 1914—was 12,487,000 cases, while the output of 1915, namely, 8,400,000 cases, is more than four million cases short of the annual average of the previous five years. This method of comparison entirely avoids and negatives any question of carry-over, as there certainly could not be a carry-over dating back six years.

In fact, the low prices had stimulated consumption and the public had eaten the carry-over. Wholesale grocers sold freely at the low prices while buying and stocks in retailers' hands did not accumulate.

Canned Corn.—The determination on the part of corn canners to cut down their acreage came to naught. Those who were most urgent in advising it packed the most apparently, and it was the old idea of everyone trying to reform the other fellow and quietly profit by his reformation. If weather conditions in northern Ohio, Wisconsin, New York and Illinois had not been bad and likewise in northern Iowa there would have been a bumper pack of canned corn, but the weather helped corn canners to "save their faces with the following comparative result, viz:

Output of Canned Corn in United States.

For the year 1908, cases of 2 doz. No. 2 cans.....	6,779,000
For the year 1909, cases of 2 doz. No. 2 cans.....	6,787,000
For the year 1910, cases of 2 doz. No. 2 cans.....	10,063,000
For the year 1911, cases of 2 doz. No. 2 cans.....	14,301,000
For the year 1912, cases of 2 doz. No. 2 cans.....	13,109,000
For the year 1913, cases of 2 doz. No. 2 cans.....	7,283,000
For the year 1914, cases of 2 doz. No. 2 cans.....	9,789,000
For the year 1915, cases of 2 doz. No. 2 cans.....	10,124,000

It will be seen that the output was nevertheless greater by 335,000 cans than that of 1914, but less than the annual average for the five previous years by 785,000 cases.

This places the canned corn outlook in a very favorable situation and as there has been but little speculation or market advance beyond the opening price so far, this article is regard-

ed as a good purchase at present prices, with strong prospects of a steadily advancing market all during the season.

Canned Peas.—The enormously heavy output of canned peas for 1913 and 1914 and the very low prices obtained seemingly should have taught canners a wholesome lesson and inspired them to cut down their acreage, especially as it was known that there was a large carry-over from those years.

Through some unwise influence the statistics of the pea pack or canning output for 1915 has been suppressed, and though collected or compiled, canners have been obligated not to give it out for publication.

The policy is bad, because the public always imagines that conditions are worse than they actually are and the withholding of the actual figures gives rise to a feeling of insecurity and uncertainty and resentful suspicion on the part of buyers and distributors, more harmful than the truth.

Output of Canned Peas in United States.

For the year 1908, cases of 2 doz. No. 2 cans.....	5,577,000
For the year 1909, cases of 2 doz. No. 2 cans.....	5,028,000
For the year 1910, cases of 2 doz. No. 2 cans.....	4,347,000
For the year 1911, cases of 2 doz. No. 2 cans.....	4,532,000
For the year 1912, cases of 2 doz. No. 2 cans.....	7,307,000
For the year 1913, cases of 2 doz. No. 2 cans.....	8,770,000
For the year 1914, cases of 2 doz. No. 2 cans.....	8,847,000
For the year 1915, cases of 2 doz. No. 2 cans.....	9,500,000

The estimate we give of the output of canned peas for 1915 is of course not official, but a party who knows told us that it was a little under rather than over the actual output.

Basing the output upon the estimate, however, we find that the annual average for the five previous years was only 6,761,000 cases, and that a nine and a half million estimated pack exceeds the five years' annual average about 40 per cent, but is only about $7\frac{1}{2}$ greater than the average pack of 1913 and 1914, two previous years, and as the low prices are heavily stimulating consumption and diverting the demand from tomatoes toward peas the market can at least be said to be in a hopeful position. Wholesale and retail grocers at least seem to have more speculative confidence in the canned pea market than in any other kind of canned foods, and the buying is heavy and constant.

Canned Apples.—This market has dragged all through the year and there does not seem to be much hope for it.

Canned Salmon.—There has been a considerable demand for export toward the close of the year, which has had the effect to advance prices on some kinds. The figures of the output for 1915 have not been officially given out.

The General Situation.—At the close of the year 1915 the canned foods market can be said to be in a satisfactory situation. Stocks in first and in second hands are not excessive and compared with other foods prices are exceedingly low.

There is no doubt that all supplies will be needed for home consumption and if an export demand should come the supply will be inadequate and values will go much higher.

Hawaiian Pineapple.—The largest output of this delicious product ever placed on the market is going rapidly into consumption and will all be used.

California Canned Fruits.—The exceedingly low prices prevailing is putting this output into use and though canners have but recently begun to get orders for export, the foreign trade is beginning and is likely to absorb all surplus.

Various Articles.—The supply of stringless and refugee green and white beans will be inadequate. Succotash is already out of first hands. Kraut is plentiful, but very cheap and likely to go higher early in the spring. American sardines, as usual, were largely packed, but are strongly held and higher as the year closes. New York canned fruits, cherries and berries, peas and plums, are well sold up and prices are yet low.

The Outlook.—The wise men of the street in this line are all anticipating an active and advancing market all during the coming spring and summer in the canned foods line, and if peace should be declared in Europe soon a wildly speculative market in canned foods is predicted.

ANNUAL DRIED FRUIT MARKET REVIEW.

By Veritas.

The indication early in the season on all California dried fruits was a large crop. The result, however, in nearly every variety has been disappointing and the tonnage in most all cases turned out considerably below the early estimate. Based upon the indication of large crops on all varieties of fruits, prices opened on a very low basis, with the exception of prunes. The prune market opened around a $4\frac{1}{2}$ -cent basis. The basis price on the clean-up of the previous crop, 1914, was around 5 cents. The opening price on prunes, while high, was somewhat attractive because it was quoted $\frac{1}{2}$ cent lower than the clean-up of the previous crop and some sales were made on the $4\frac{1}{2}$ -cent basis. The market, however, weakened to around a 4-cent basis some 60 days later and finally reached a $3\frac{1}{2}$ -cent basis. At this price a large part of the crop was sold.

Strange to say, there was little or no speculative buying during the early part of the season, even though values were low, as there seemed to be an inclination on the part of all handlers to buy for requirements only. The demand, however, both domestic and foreign, was steady, with the result that finally when the clean-up came, it was found that not only had the original estimate been placed too high, but that the crops produced, because of the steady demand, both domestic and foreign, were closely cleaned up. This fact was discovered early in the fall and at that time we had material advances on all varieties of fruit, even including peaches, which had been dragging at a very low price for nearly two years.

Apricots: The complete returns on the apricot crop for the entire State of California placed the production at 16,000 tons, as against 20,000 tons, the original estimate. Of this 16,000 tons there remains practically nothing in the growers' hands. Packers' supplies are very closely concentrated. Values have, as above stated, shown a very steady advance from the beginning of the early fall and to date indications are for still higher prices.

Peaches: The crop of 1914 was a big one. There was a carry-over from the preceding year, giving an added tonnage to be disposed of during 1914 that taxed the capacity of the California shippers to the limit. Unusually low prices were named the latter part of the season and early in 1915 to clean up such stock. Based upon these prices, values on the new crop were named far below their real worth. Free short selling was indulged in during the early spring as everything looked favorable for a large yield. The low prices proving very attractive, however, resulted in a big demand which not only cleaned up the carry-over into 1914 and the 1914 crop, but also cleaned up a very big percentage of the 1915 crop with the result today that there is only a normal carry-over and values have advanced a cent and a half to two cents a pound from the low point, but are still below normal prices for this item; and there is every reason to expect still stronger prices as the season advances. The big consuming season on peaches is ahead of us.

Prunes: The prune crop is more or less difficult to estimate early in the season. The early estimate this season placed the 1915 production at 200,000,000 lbs. When the final returns were in, the crop for the entire State of California turned out about 165,000,000 lbs. The carry-over from the year previous was very light, giving us only the 165,000,000 lbs. produced in 1915 for both the domestic and foreign consumption. While it was impossible to ship to Germany direct, one of the largest European consumers, still a great many prunes found their way into Germany through other countries; and other countries that had not previously purchased California prunes were large users, with the result that the export of prunes to Europe shows up this year with about the usual tonnage. The domestic consumption has been fully up to normal, with the result that most packers have only limited quantities on hand and the stock in growers' hands, almost without exception, has been entirely cleaned up. Oregon prunes, both Italian and Petite, are completely out of growers' hands and not over five to ten cars are held by

packers. The crop in Oregon this year was less than half of normal. Not for several years have conditions been so favorable for an absolute clean-up prior to January first on all varieties of prunes. The market is in extremely healthy condition and with light stocks available, values should advance.

Raisins: The entire raisin crop was harvested this year without damage, which is unusual as nearly every year there is more or less rain damage. The crop of the Muscat variety was very large, but the consumption has also shown a big increase and the carry-over of Muscats at this time is just about normal. Seedless varieties of raisins were in exceedingly light supply and almost all packers prorated delivery. Europe was a very large user of seedless raisins this year, owing to the fact that they were unable to secure their requirements from Turkey. The consumption in this country was above normal, owing to the scarcity and high price of currants. It is safe to say that seedless raisins are entirely out of both growers' and packers' hands. The only stock that is held is in the hands of the jobbers and dealers throughout the country.

The above would indicate that the entire California dried fruit line is on a very strong basis and that values will continue to strengthen up to next crop. This is about the first time in the history of the industry when all varieties of fruits have been in this position.

ANNUAL SALT FISH REVIEW.

The year just closed has been one of great uncertainty for importers of fish, and many surprises have developed from time to time. During the closing months of 1914 higher prices began to prevail on most all of the fish products produced in Norway, Holland, England and France, and this condition has prevailed throughout the entire year just closed. There has not been a commodity in fish, but what has become constantly higher in price, and in many instances items have been unprocurable, due to the fact that continental Europe has been buying freely and used up all of the available material.

All items of canned fish, such as Norwegian sardines, kippered herring, herring in tomato sauce, and fish balls, have continued to advance in price until the price got beyond the reach of the American importer, except in rare cases. Norwegian fish balls have been virtually off of this market for the last three months, and sardines reached the prohibitive price of 40 kroners in Norway. Still, it would seem that even with these high prices prevailing, that Germany has been a constant purchaser and if reports coming to this country can be depended upon, there are virtually no stocks of sardines, either of the better quality or of the poorer grades, that are obtainable, except in a very small way. The high rate of war insurance that has prevailed from time to time, together with the increased valuation placed on the merchandise by the custom authorities, has made the price on these goods very, very high in this country.

In Holland, where the principal article of export is the Holland herring, Germany also has been buying constantly and heavily at very high prices, with the result that comparatively few carloads of these much desired fish have found their way to the Chicago market. It is reported that New York during the year 1915 has not received ten carloads of Holland herring, and we doubt very much if Chicago has done much better.

Herring which normally sell at reasonable prices and were beginning to find a place for themselves in the western market, reached high prices early in the season, have stayed up well throughout the season. The Yarmouth fishing, which closed recently, found stocks practically sold up and prices rising.

Iceland herring, which in normal years bring and are worth, from \$8 to \$9 a barrel, this year have been sold all the way from \$13 to \$20 a barrel f. o. b. Chicago. There seems to have been some considerable quantities of this species of fish brought to this market and they have found their way to the trade even at these high prices; but on the other hand, it may be possible that these herring have always sold for too

little money in former years, as they are quality goods always and are much desired by people who know the eating value of a good fat herring.

The catch of mackerel abroad this year has been very much below normal, both in the Irish waters as well as in Norwegian waters, and prices have been exceptionally high. This is hard to figure out, as the United States takes most of the catch from both of these sections of this item of fish food.

The situation on domestic fish has been an interesting one, and is yet. As a result of European conditions, immense quantities of the American cured herring have found their way into the market and into consumption by the people who usually buy the Norwegian goods. These goods started out at about \$6 per barrel, but are now selling freely at \$12, and the winter fishing at Newfoundland has not turned out as well as might be desired, with the result that the prospects look rather gloomy for a reduction in price on these herring for 1916. The quality of these herring that are caught during the winter months in Newfoundland is very fine indeed, the fish being white meated and fat, uniform in size and very desirable as an item of fish food.

Early quotations on Sloe herring from Norway indicate rather high prices and it would seem that these goods will bring from \$15 to \$16 a barrel on this market. With a price of about \$12 on Newfoundland herring, it is an easy guess to decide which goods will sell to the best advantage.

There has been an abundant catch of all kinds of ground fish and codfish is stored in great quantities, we understand, in the eastern market at the present time. There has been neither an advance or decline in this item. Smoked bloaters are higher this year than usual, due to the fact that they are made from Newfoundland herring and the herring are worth so much more in the barrels, that, of course, it means a higher price for these same goods in boxes.

The item of boneless herring has been very cheap on the contrary, but it is about time for a change in the market on this commodity and eastern producers are already predicting much higher prices on boneless.

Finnan haddies have been high, due to the fact of the high price that fresh haddock have been bringing ever since the cold weather came in Boston and other eastern points.

The items of bellycuts, anchovies, stromming, are practically unprocurable from Norway and outside of the stock that was carried from last season, which by now should be pretty well cleaned up, there is virtually nothing on this market of these species of fish.

The constant tendency for the entire year has been upward in price and in summing up it would seem that we can thank the European war condition principally for the upward tendency on prices of various items of fish. It is interesting to note, however, that even though the prices have been higher, the demand for fish has been good and buyers in general have cheerfully met the situation as they found it and bought their requirements, paying the price without a quiver. While it is quite possible that there has not been as much money made by importers of foreign fish this year as in 1914, at the same time it would seem that there has been a fair profit made on the investment required to handle fish in general and that 1915 closes up not so bad after all for the fish importer.

DAVID H. LANE COMPANY.

ANNUAL TEA REPORT.

By Supervising Tea Examiner.

Sir: I have the honor to present the third annual report covering the work of the office of the Supervising Tea Examiner for the fiscal year ended June 30, 1915.

The office of Supervising Tea Examiner was established for the purpose of placing in the Treasury Department an expert to supervise the inspection of teas imported into the United States, under the act entitled "An act to prevent the importation of impure and unwholesome teas," approved March 2, 1897, and to secure efficiency and uniformity in such inspection at the ports (T. D. 32554). Tea examiners are stationed at the ports of Boston, Chicago, Honolulu, New York, St. Paul, Tacoma (Puget Sound), and San Francisco.

The equipment and system of records adopted by this office for use at the different ports remain the same and continue to give entire satisfaction.

During the year a larger number of samples than in any previous year were sent out to the tea examiners for study and review, while fewer samples than in previous years were received from the examiners for examinations and opinion by this office.

During the year 925 samples of teas were examined by this office. This number was made up in part of samples submitted by the port examiners and in part of samples called for by the Supervising Tea Examiner as checks on the conduct of the work at the different ports. The total included 114 samples of teas which had been rejected by the examiners, while 807 were of teas which had been passed.

The inspection and examination of these numerous samples showed the work of the examiners at the different ports to be not only efficient, but marked by uniformity. The samples examined came from the ports as follows: Boston, 145; Chicago, 144; Honolulu, 32; New York, 73; Tacoma (Puget Sound), 244; St. Paul, 57; and San Francisco, 230.

The annual inspection of the conduct of the work at the ports was completed during the first half of the year. All the ports of examination were visited except the port of Honolulu, where the imports average less than 400,000 pounds per annum. The entire work of each port was carefully reviewed, the technique of the examiners standardized, and such other corrections and improvements as might be conducive to uniformity and efficiency in the work established. The equipment, records, and the accommodations for the examiners were found to be satisfactory at all ports visited, except that at Chicago and Boston the office and laboratory accommodations were inadequate. It should be explained, however, in this connection, that the entire appraiser's stores in Chicago is very crowded and that the tea examiner there is faring as well, if not better, than those in charge of other offices in the building, while at Boston the examiner will have adequate quarters as soon as the new appraiser's building is completed. The plans for this building include for the tea examiner a large, well-lighted laboratory and a large store-room for samples. It should also be added that despite the inadequate accommodations complained of, the work at the ports in question was being conducted in accordance with departmental requirements.

During the last fiscal year comparatively few teas containing coloring matter were offered for importation into this country. The proportion of such teas will be seen in the analysis of statistical report. The presence of color was confined almost entirely to the Country Green teas of China, which form but a small percentage of the total importations. During the current summer this office has received through the Department of State several communications from China, indicating that radical steps are being taken by the Civil Governors of the Provinces in China where the Country Green teas are grown and cured, to prevent coloring and facing of such tea. In several of these provinces a provincial government inspection of tea has been established to prevent the coloring of teas. It might also be mentioned here as a matter of interest that some of the district authorities have issued regulations requiring the thickness of the lead lining of the tea chest to be considerably increased to better preserve the quality of the teas destined to the United States.

While in Washington the members of a committee from the honorary Chinese Commission to the United States favored this office with a visit to discuss at length the requirements of the United States tea inspection service, so that they could instruct the tea growers and shippers of their country as to these requirements. With such strong influences working against colored teas in the Country Green tea districts of China, it is reasonable to hope that the time is not far distant when the manufacture of colored teas shall be a thing of the past in the tea-producing countries of the world.

The "Read test" for the detection of artificial coloring in teas, and which has the support of practically the entire tea trade of the country, was again recommended by the United

States Board of Tea Experts, and again adopted by the department as the official test for "purity" as regards artificial coloring matter and facings. The simplicity, uniformity, and inexpensiveness of this test enables its use by tea buyers abroad in making their purchases. This many of the buyers have done with the result that the colored tea offered for admission has been reduced to almost a negligible quantity.

In the last annual report it was stated that the test case brought by certain importers to determine the legality of the Read test had been won by the Government, a decision having been rendered dismissing the case for lack of equity, but strongly supporting the Secretary of the Treasury and the United States Board of Tea Appeals, to prescribe the test to be used in examining imported teas. Subsequent to that report the case was appealed by the importers and on June 9 the Circuit Court of Appeals handed down a decision reversing the decree of the United States District Court of New York. The Treasury Department has asked the Department of justice to take an appeal from this decision to the Supreme Court of the United States.

Report by districts of the various kinds and quantities passed and rejected, and why rejected, during the fiscal year ending June 30, 1915:

BOSTON.					
Variety.	Examined. Lbs.	Passed. Lbs.	Rejected. Lbs.	Rejected for Rejected color or for facing. quality.	
				Lbs.	Lbs.
Formosa Oolong...	2,639,107	2,581,187	57,920	.....	57,920
Foochow Oolong...	31,900	31,900	.....	.....	.....
Congou	723,136	720,399	2,737	.....	2,737
India	4,744,372	4,744,272	100	.....	100
Ceylon					
Java	221,567	221,567	.....	.....	.....
Ceylon Green.....	56,144	56,144	.....	.....	.....
Ping Suey Green...	113,004	112,626	378	378	.....
Country Green.....	54,513	41,716	12,797	12,797	.....
Japan	318,188	318,108	80	.....	80
Japan Dust.....	36,430	36,360	70	70	.....
Capers	12,856	12,856	.....	.....	.....
Scented Orange Pekoe	13,272	13,272	.....	.....	.....
Scented Canton...	11,530	11,530	.....	.....	.....
Canton Oolong....	5,678	5,545	133	.....	133
Total	8,981,697	8,907,482	74,215	13,245	60,970
CHICAGO.					
Formosa Oolong...	489,805	489,805	.....	.....	.....
Congou	525,670	524,146	1,524	.....	1,524
India	2,173,154	2,173,154	.....	.....	.....
Ceylon					
Java	13,631	13,631	.....	.....	.....
Ping Suey Green...	3,474,189	3,474,189	.....	.....	.....
Country Green.....	979,193	978,144	1,049	1,049	.....
Japan	3,775,063	3,775,063	.....	.....	.....
Japan Dust.....	297,020	297,020	.....	.....	.....
Scented Orange Pekoe	16,867	16,867	.....	.....	.....
Canton Oolong....	45,092	45,092	.....	.....	.....
Total	11,789,684	11,787,111	2,573	1,049	1,524
HONOLULU.					
Congou	7,313	7,313	.....	.....	.....
India	22,630	22,630	.....	.....	.....
Ceylon					
Japan	163,513	162,673	840	.....	840
Scented Canton....	168,985	160,915	8,070	.....	8,070
Canton Oolong....	2,951	2,896	55	.....	55
Total	365,392	356,427	8,965	.....	8,965
NEW YORK.					
Formosa Oolong...	4,440,392	4,440,392	.....	.....	.....
Foochow Oolong...	1,201,738	1,012,869	188,869	.....	188,869
Congou	3,750,983	3,307,739	443,244	.....	443,244
India	17,648,626	17,648,626	.....	.....	.....
Ceylon					
Java	139,226	139,226	.....	.....	.....
Ceylon Green.....	110,177	110,177	.....	.....	.....
Ping Suey Green...	2,858,312	2,857,268	1,044	1,044	.....
Country Green.....	1,323,869	1,162,249	161,620	161,620	.....
Japan	498,987	497,787	1,200	.....	1,200
Japan Dust.....	3,200	3,200	.....	.....	.....
Capers	4,625	4,625	.....	.....	.....
Scented Orange Pekoe	35,024	35,024	.....	.....	.....
Scented Canton...	6,400	6,400	.....	.....	.....
Canton Oolong....	244,936	243,238	1,698	.....	1,698
Total	32,266,495	31,468,820	797,675	162,664	635,011

TACOMA.					
Variety.	Examined.	Passed.	Rejected.	Rejected for color or facing.	Rejected for quality.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Formosa Oolong...	5,016,713	5,016,559	154	.....	154
Foochow Oolong...	251,617	251,617	.....	.....	.....
Congou	207,148	207,148	.....	.....	.....
India	657,348	657,348	.....	.....	.....
Ceylon .....	.....	.....	.....	.....	.....
Ping Suey Green..	779,320	779,320	.....	.....	.....
Country Green....	34,102	18,763	15,339	15,339	.....
Japan	12,898,138	12,898,138	.....	.....	.....
Japan Dust.....	1,567,461	1,563,461	4,000	.....	4,000
Scented Orange Pekoe	120	120	.....	.....	.....
Scented Canton....	31,770	30,770	1,000	.....	1,000
Canton Oolong....	4,115	4,035	80	.....	80
Total	21,447,852	21,427,279	20,573	15,339	5,234

ST. PAUL.					
Formosa Oolong...	103,975	103,975	.....	.....	.....
Congou	3,476	3,476	.....	.....	.....
India	169,010	169,010	.....	.....	.....
Ceylon .....	.....	.....	.....	.....	.....
Ceylon Green	416	416	.....	.....	.....
Ping Suey Green..	613,011	613,011	.....	.....	.....
Country Green....	3,993	3,993	.....	.....	.....
Japan	2,009,500	2,009,500	.....	.....	.....
Japan Dust.....	159,480	159,480	.....	.....	.....
Scented Canton....	2,915	2,915	.....	.....	.....
Canton Oolong....	600	600	.....	.....	.....
Total	3,066,376	3,066,376	.....	.....	.....

SAN FRANCISCO.					
Formosa Oolong...	2,781,366	2,781,366	.....	.....	.....
Foochow Oolong...	40,075	40,075	.....	.....	.....
Congou	1,959,722	1,959,662	60	.....	60
India	2,030,071	2,030,071	.....	.....	.....
Ceylon .....	.....	.....	.....	.....	.....
Ping Suey Green..	2,717,954	2,703,051	14,903	14,903	.....
Country Green	1,043,162	1,041,000	2,162	2,162	.....
Japan	9,252,072	6,252,072	.....	.....	.....
Japan Dust.....	190,164	190,164	.....	.....	.....
Capers	5,362	5,362	.....	.....	.....
Scented Orange Pekoe	17,526	17,526	.....	.....	.....
Scented Canton....	261,638	261,478	160	.....	160
Canton Oolong....	90,246	63,057	27,189	.....	27,189
Total	17,389,358	17,341,884	44,474	17,065	27,409

RECAPITULATION.					
Formosa Oolong...	15,471,358	15,413,284	58,074	.....	58,074
Foochow Oolong...	1,525,330	1,336,461	188,869	.....	188,869
Congou	7,177,448	6,729,883	447,565	.....	447,565
India	27,445,211	27,445,111	100	.....	100
Ceylon .....	.....	.....	.....	.....	.....
Java	374,424	374,424	.....	.....	.....
Ceylon Green	166,737	166,737	.....	.....	.....
Ping Suey Green..	10,555,790	10,539,465	16,325	16,325	.....
Country Green....	3,438,832	3,245,865	192,967	192,967	.....
Japan	25,915,461	25,913,341	2,120	.....	2,120
Japan Dust.....	2,253,755	2,249,685	4,070	70	4,000
Capers	22,843	22,843	.....	.....	.....
Scented Orange Pekoe	82,809	82,809	.....	.....	.....
Scented Canton....	483,238	474,008	9,230	.....	9,230
Canton Oolong....	393,618	364,463	29,155	.....	29,155
Total	95,306,854	94,358,379	948,475	209,362	739,113

BY DISTRICTS.					
Variety.	Examined.	Passed.	Rejected.	Rejected for color or facing.	Rejected for quality.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Boston	8,981,697	8,907,482	74,215	13,245	60,970
Chicago	11,789,684	11,787,111	2,573	1,049	1,524
Honolulu	365,392	356,427	8,965	.....	8,965
New York.....	32,266,495	31,468,820	797,675	162,664	635,011
Puget Sound.....	21,447,852	21,427,279	20,573	15,339	5,234
St. Paul.....	3,066,376	3,066,376	.....	.....	.....
San Francisco....	17,389,358	17,344,884	44,474	17,065	27,409
Total	95,306,854	94,358,379	948,475	209,362	739,113

Remarks.—It must be remembered that this report indicates the rejections made by the tea examiners, and not the final rejections made by the United States Board of Tea Appeals.

An analysis of the above statistical report shows that for the fiscal year ended June 30, 1915, 0.99 per cent of the tea importations were rejected by the examiners as being below the standard, 0.22 per cent for artificial color and 0.77 per cent on account of "inferior quality." During the previous fiscal year ending June 30, 1914, the total rejections were 0.9 per cent, but the proportion was 0.7 per cent for artificial color and 0.2 per cent for inferior quality. The increase in percentage of rejections for inferior quality for this year was due to an increased demand on the United States markets for low-grade teas by some of the countries at war. To supply this demand American dealers offered large inventories of such teas for examination at United States ports of entry,

knowing that if the teas were rejected they could easily find a ready market abroad. In many cases these teas have been shipped to foreign markets after being rejected by the examiners, without taking an appeal to the United States Board of Tea Appeals. This has been especially true of the Foo-chows and Congous, of which 12.3 per cent and 6.2 per cent, respectively, have been rejected on account of inferior quality.

The proportion of tea examined at the different ports remained about the same, with the exception of New York and Tacoma; at the former place there was a decided decrease and at the latter place the number of pounds examined were nearly double over previous years.

The proportion of the different kinds of teas imported during the year remained about the same as in the preceding year, with the exception of Congous, which have increased 32 per cent and the Country Greens, which have increased 28½ per cent.

The total amount of tea imported and examined this fiscal year was 95,306,854 pounds, against 92,180,460 pounds for the preceding fiscal year. During this fiscal year 4,813,878 pounds of tea were exported, against 983,222 pounds for the preceding fiscal year. (See Department of Commerce report.) From these figures it appears that although the imports this fiscal year were much larger than the previous year, the amount remaining here for consumption was approximately the same, because the amount exported was also larger.

There were 60 protests before the United States Board of Tea Appeals during the fiscal year, which were decided as follows: In 38 cases the rejections by the tea examiners were sustained. In 14 cases they were partly sustained, and in only 8 cases were the rejections reversed. The 60 protests represented 10,383 packages of tea, of which 7,806 packages, or 84 per cent, were finally rejected, and 1,452 packages or 16 per cent, were admitted by the board. The very large percentage of final rejections by the United States Board of Tea Appeals clearly demonstrates the uniform work done by the tea examiners.

The number of complaints received during the fiscal year relative to the inspection at the different ports was small. Every complaint was carefully investigated and the complainants advised of the findings.

At the present time samples for inspection are drawn by customs officers at all the ports except New York and Chicago; at these ports the samples are sent in by the importers, but drawn from packages designated by the collector. In order that all samples of tea drawn for inspection shall be drawn by or under the direct supervision of the customs service, it is respectfully recommended that the sampling force at New York be increased by five, and that at Chicago by one. With this recommendation put into effect the organization of the tea inspection service will be absolutely uniform at all tea examination ports.

In conclusion, it is very gratifying to state that since the non-colored standards were adopted and since the Read test went into operation a little more than three years ago, all the tea-producing countries except a few Provinces in the remote tea producing parts of China, have consistently sought to eliminate the use of artificial coloring matter. However, the others are at last taking the matter up and demanding the discontinuance of this form of sophistication. The civil governors of those Provinces which have issued proclamations forbidding the use of artificial coloring matter are demanding its discontinuance not only on the ground that it is hurting China's tea trade with the United States, but because it is a deception which must be stopped. Thus it will be seen that the prohibition of the United States against the importation of colored teas has had so far-reaching an effect as to practically free the entire tea-producing world from this deceptive practice.

Respectfully submitted,

GEO. F. MITCHELL,
Supervising Tea Examiner.

The Secretary of the Treasury, Washington, D. C.



Gleanings from the World of Foods



SHAD and lobsters are disappearing rapidly from American waters, despite artificial propagation efforts, according to the annual report today of the United States Bureau of Fisheries. Co-operation and aid by state fishery authorities is suggested as a remedy for threatened depletion. Shad fishing in the Chesapeake Basin last year was the poorest known, said the report. The decline in the lobster industry, the report declared, was viewed with great uneasiness. More efficiency in artificial propagation was urged as necessary to arrest diminution. What the bureau is doing to reduce the high-living cost through conservation and utilization of food fishes is told at length. "Efforts of the bureau along this line," said the report, "entitle it to be regarded as a public benefactor." Millions of food fish left stranded every year by floods are saved and distributed, said the report, and much is done to exploit as food little known fish and other aquatic products.

* * *

¶ The Shermogue Oyster Co. has just planted on the New Brunswick coast 22 acres of oysters and 5 acres of clutch (spawn) at a cost of \$100,000.

* * *

¶ Caracas importers received information by cable from Spain to the effect that the Spanish Government has prohibited the exportation of olive oil and sardines. In view of the fact that Venezuela consumes large quantities of both these products and has been buying a substantial proportion of each from Spain, it is possible that a market might be found for American cottonseed oil (a very little cottonseed oil is manufactured in Venezuela) and also for canned salmon. The import duty per pound, including all surtaxes, on olive oil is 3.43 cents; on imitation olive oil, 17.13 cents; on cottonseed oil, 10.28 cents; on sardines, 1.37 cents; and on canned salmon, 3.43 cents.

* * *

¶ American sugar has been taken in Ireland in good quantities since the outbreak of the present European war, but it has proved very damp for this climate. There seems to be a fair prospect that if the sugar were satisfactory it might hold the market even after the termination of the war, until the beet-sugar areas became fully productive once more; for sugar-beet growing in Ireland is officially pronounced not feasible. Therefore American sugar refiners and dealers might well take pains to suit this market by providing a drier sugar than that hitherto sent. The climate of Ireland is exceedingly humid, and probably the refineries should continue their processes slightly longer than usual in order to produce a very dry sugar. Dealers here state that they would be glad to dispense with the need of buying American sugar on account of this defect.

* * *

¶ Charles Spies, 65 years old, vice-president of the C. F. Blanke Tea and Coffee Company, St. Louis, Mo., died recently at his home, 2918 Allen avenue, of injuries suffered November 8, when he was struck by a train in the yards of the Relay Depot, East St. Louis. Spies was starting on a business trip to points in Illinois. He attempted to cross in front of the train, which was moving slowly, and was knocked down. At the Deaconess Hospital, in East St. Louis, it was found he had sustained a fracture of the skull and minor injuries. When the patient regained consciousness he was removed to his home. Spies, who was born in Marine, Ill., is a brother of Mrs. C. F. Blanke. He was a graduate of McKendrie College, Lebanon, and came to St. Louis in 1895. Previous to entering the coffee business he had conducted a drug store in St. Jacobs, Ill., for twenty-five years. G. W. Hill, a friend of Spies, died of injuries suffered near the place where Spies was hurt. Hill also was struck by a train at the Relay Depot and died later at his home in Murphysboro, Ill. Spies is survived by his widow and two daughters, Mrs. Victor Seiter and Mrs. K. C. Yale, both of Kansas City. The body will be sent to Marine for burial.

¶ A considerable quantity of lard from the United States is already used in some South American countries. Is the trade capable of extension? Argentina uses beef fat, or edible tallow, almost exclusively, except in the Spanish and Italian colonies, which consume large quantities of olive oil. Chilean "grasa," a mixture of beef and other fats, divides the trade with lard and cottonseed oil. In Uruguay beef tallow comprises 80 to 90 per cent of the total sales of cooking fats, and in Brazil, Colombia, Ecuador, Peru, and Venezuela lard constitutes 75 per cent or more. South America as a market for cooking fats from the United States is discussed in a monograph just issued by the Bureau of Foreign and Domestic Commerce, entitled "Cooking Fats in South America," (special Consular Reports, No. 67), which may be obtained at 5 cents per copy from the Superintendent of Documents, Government Printing Office, Washington.

* * *

¶ A seven-story addition to the wholesale grocery building of Charles Hewitt & Sons Company on Fourth street, Des Moines, Ia., is to be erected at a cost of \$100,000. The building will be of concrete and steel and the walls will anticipate additional floors if the company should need the room in the future. The present building is 68x132. The addition will be 66x68 and when the new and older buildings are connected the entire building will have a depth of 200 feet running east and west. It is expected to begin excavation at once and have the building enclosed by March 1. The company moved into the present building in 1908. The new building besides relieving some of the congestion of the wholesale department will also provide better facilities for the manufacturing department. The company makes its own brands of roasted coffee, baking powder, extracts, pancake flour, spices, powdered sugars, farinaceous foods and other products. The completed building will provide needed room for expansion for some years to come.

* * *

¶ The Diehm Grocer Co., East St. Louis, Ill., wholesalers, with Alfred Diehm at the head, will, on January 1, remove from 402 Missouri avenue to Seventh street and Brady avenue, their new home. This is made necessary on account of the great increase in business. Mr. Diehm stated that, with Mr. Jos. A. Fansler, in 1902, he came to East St. Louis and opened a wholesale grocery in the Library building. After three years the building was found to be too small to accommodate them and the structure at 402 Missouri avenue was erected for them and they secured a ten-years' lease on the same. This lease expires January 1, 1916. "For some time," Mr. Diehm stated, "I have been looking for a larger structure. Three months ago I secured a lease on a building, 75x125 feet, three stories and basement, erected and occupied by the St. Louis Preserving and Syrup Company, at Seventh street and Brady avenue. About \$5,000 had been expended in making it suitable for a wholesale grocery house. The floor space is about three times as great as the present location, and we feel confident that it will be adequate for our business for some time." Just as soon as the new place is completed and everything arranged Mr. Diehm intends to have a house-warming and invite the merchants of East St. Louis to pay a visit to the place.

* * *

¶ The California Associated Raisin Company is making money. In a letter issued recently to the raisin growers and stockholders in the company the vice-president and manager informed them that the earnings for the fiscal year 1914 were a little over 11 per cent while the undivided profits of the company is \$146,818. However, the company will not at the present time declare a dividend. The letter follows: "To the Raisin Growers and Stockholders of the California Associated Raisin Company: In last Sunday's issue of the Fresno Republican we published that there would be distributed \$108,000 as a further payment on raisins delivered from

the 1914 crop. It is also with pleasure we can inform the stockholders their investment earned during the fiscal year of 1914 a little over 11 per cent, or financial statement, which was published last Sunday, shows undivided profits \$146,818, part of which was carried over in surplus account from the year 1913. If the company had an average crop to deal with, a dividend would undoubtedly have been declared by the board of directors; but the largest crop in the history of the state has to be financed, therefore the board has decided not to declare a dividend at this time. If the movement of raisins continues in the near future, as well as it has been doing up to this time, it may be possible that a dividend will be declared at no distant date. James Madison, Vice-President and Manager, California Associated Raisin Co."

* * *

¶ By a deal consummated recently through the agency of the Ed M. Semans & Company, the Williamson-Halsell-Frazier Wholesale Grocery Company of Oklahoma City comes into possession of the lot immediately west of its present location at Santa Fe avenue and First street. The property formerly was in possession of the Lemp Brewing Company of St. Louis and negotiations for its purchase have been under way for some time. While Mr. Halsell of the Williamson-Halsell-Frazier Company does not care to state at this time just exactly what kind of a building will be erected on the newly acquired property, he gives the assurance that the company will build in the near future and thereby enlarge its business which in the past few years has shown a remarkable development. The consideration is not named by any one concerned in the deal, but it is understood a good big price was paid as the property is located very advantageously and the former owners are said to have received as many as 500 letters from parties who have heretofore been desirous of getting a price on it. It remained for C. W. Brooks, manager of the real estate and loan department of Ed M. Semans & Company, who engineered the deal, to finally induce Lemp Brewing Company to name a price. Five letters were written by Mr. Brooks before the company would even place a valuation on the property. The sixth letter did the work and the rest was easy sailing.

* * *

¶ Never before in the history of the Sacramento valley canning industry has there been such a persistent demand for canned goods at this season, or such promise of future demand, all of which indicates that the present product of the valley canneries will practically be cleaned up by the middle of January, something that has not happened for a period of fifteen years. Movements of the canneries' output, which is in full swing at this time, is due, not to any shortage of crop (the output was fully up to the normal this season), but is caused by the demand from foreign lands, where the fighting men must have a properly balanced ration if their strength is to be maintained. With the decrease of the activity by German submarines in the Atlantic the shipments of supplies from this coast are moving more freely. At no time, however, has the submarine warfare made any serious inroads into shipments from the Pacific, no cargoes having been lost, although one ship sailing from San Francisco to London was lost after she had discharged her cargo and started back. Now, in addition to the demands for canned fruits and vegetables, which has been fairly constant from England, orders are coming in from France. Thus, recently a shipment of 1,000 cases from Yuba City was routed down river to San Francisco and there loaded for a French port. Much of the fruit and vegetables from this valley is going by rail, but many of the English ships now in San Francisco bay are taking cargoes which will go around the Horn. Other ships are loading for Australia, from which point the shipments will be re-routed to Arabian and Egyptian ports, where the Australian contingent is at grips with the Turks. This movement is facilitated by the fact that each ship from Australia brings from \$3,000,000 to \$5,000,000 in gold to pay for supplies, so that there is no trouble about exchange, the money being all deposited in San Francisco banks. As the stocks of canned goods melt away much interest is aroused by the fact that the cannery men read the signs wrong with respect

to peaches, and now a shortage of canned peaches is promised. The season just past was a record breaker as far as peaches were concerned, and hundreds of tons rotted on the ground the country over. Because the fruit was so plentiful and so cheap it was not thought there would be any great demand for the canned product, and thus no extra large amount was put in tins. Now the end of the canned product is in sight and prices are holding very firm. Canned tomatoes, too, are going to be short this winter, but this is owing to the failure of a large part of the crop in the East and Middle West.

* * *

¶ Porto Rican coffee growers, anxious to do business through the port of New Orleans, will send a delegation here within a few weeks to complete arrangements for the opening of a depot and to conduct a publicity campaign to introduce the island bean in the South. The delegation will represent the Porto Rican Coffee Growers' Association, and there is a possibility that the planters, after the local depot is established, will change the port of entry from New York to New Orleans. News to this effect was brought to New Orleans Tuesday morning by Hal R. Yockey, business manager of *Mercurio*, Spanish publication issued monthly by the Merchants' and Manufacturers' Bureau, who returned from an extended trip to the island. "All the Porto Rican growers desire is fair treatment," said Mr. Yockey. "They want to ship their product by way of New Orleans and will do everything in their power to establish relations with the wholesalers of this city. We have everything in our favor and I can see no reason why New Orleans merchants should not take advantage of the opportunity that awaits them. We have just as good service between New Orleans and Porto Rico as there is between New York and Porto Rico. Our freight rates, likewise, are such as to attract the attention of the business men of the island." Mr. Yockey had occasion to interview a number of coffee growers and shippers and learned that they are willing to sell their product here at a much lower price than they have been receiving in Europe. The date of the coming of the delegation has not yet been fixed. Mr. Yockey said in future *Mercurio* will be represented on the island by Damon E. Otoro, who will be the paper's general representative.

* * *

¶ For several years past repeated efforts have been made by persons interested in the supply of meat in Manila to import fresh meat from Hongkong and South China generally, reports Consul General George E. Anderson of Hongkong. Up to 1910 large numbers of South China cattle were shipped to the Philippines, but the trade was stopped at that time as a result of the prevalence of cattle diseases in South China, which were thus being introduced into the Philippines. From time to time the high price of meats in the Philippines has forced the suppliers of such provisions to look to the China coast for additional supplies, and the matter at times has been the subject of official investigation and governmental action. Heretofore, however, the lack of cold storage space in ships plying between Hongkong and Manila, the lack of active co-operation in Hongkong and Manila on the part of the cold storage interests, and the tendency of the Chinese to raise the price of meat animals in case a fixed demand from the Philippines was felt in local markets have prevented action. An arrangement has now been completed, however, between the chief interest in Hongkong dealing in frozen-meat products, the Hongkong Dairy Farm, Ltd., and the chief cold storage interest owned by private capital in Manila, the Philippine Cold Stores, Ltd., for the shipment from Hongkong to Manila of 500 beef carcasses per month. The meat is to be prepared and frozen by the Hongkong company and is to be shipped to Manila by the steamers Changsha and Taiyuen, which belong to the Manila company purchasing the meats. These steamers are regularly employed in the import of meat from Australia into the Philippines, and run from Sydney to Hongkong. The supply of meat from Australia is running low the current season as a result of the drought in that Dominion, which has made the import of meat from Hongkong possible.



Food News from the East



NEW YORK, Dec. 31.—The factional troubles of the National Housewives' League, to which I referred in my letter of last month, continues to be a theme of lasting interest; the more, especially so from the standpoint of food manufacturers, because of the fact that they have come to recognize in Mrs. Heath and her fellow officials of the League allies of the first magnitude. With her organization occupying a position of confidence among housewives, it is easier for manufacturers to demonstrate the desirability of their products to a few semi-expert officials than to the mass of housewives generally, and experience has proved Mrs. Heath a source of help.

Readers of this column are already familiar with the insurgency of the New Jersey state leaders—a revolt which springs from motives no clearer now than two or three months ago (save to suggest jealousy on the part of both the rebellious housewives and certain manufacturers who resent the endorsement of Mrs. Heath for certain rival products). So far as any actual proceedings are concerned the whole affair looks like a mixture of “a fishing expedition,” to find some legal ground on which to assail Mrs. Heath and also to inspire internal opposition sufficient to depose her or split the League. Otherwise there appears nothing tangible.

The nearest thing to actual progress was the decision of State Attorney General Woodbury to grant the “investigation” prayed for by the New Jersey contingent. He assigned Special Deputy Attorney General L. J. Obermeyer of this city to look into the conduct of the League and several days have been consumed in hearings, with no apparent drift, save to vent the feelings of the New Jerseyites as to what they regard as Mrs. Heath's dictatorship. It has been shown that the organization has been such as to leave actual control largely in the hands of the executive committee and that committee has apparently exercised its management in accordance with the by-laws.

It is quite clear, moreover, that Mrs. Heath took good care to see that no such uprising as the present should wreck the work of the League, for she had divided the activities of the educational and publication work from the main organization and it has not yet appeared that in doing so she departed from the spirit of the by-laws. There are four corporations involved and even if the uprising results in any action it is apparent that it can affect only the parent organization and not touch either the “headquarters” exhibition room, the “educational committee” or the publication. The “commercialism” about which the original criticism arose is connected with those corporations and not at all with the one the New Jerseyites belong to.

All these intricacies are not denied by Mrs. Heath and her supporters and the longer the hearings go on the less does there appear any ground for assailing her, other than a desire of the “outs” to get “in.” It may be that ultimately something irregular will be discovered, but it has not yet come to the surface and Mrs. Heath's friends still feel confident of their ability to handle the situation.

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THE AFFLICTION OF DILLON.

Next to the festive flea, which refuses to stay long enough in one place to be located, the shiftest thing which has appeared on the official horizon of these parts is State Market Commissioner J. J. Dillon. If Dillon's stewardship is to be measured by his originality and his ability to discover false leads, start off on them with a flourish of trumpets and sundry columns of glorification in the newspapers and jump from one subject to another with the agility of the grasshopper—he is a prodigious success. Also, if he pleases the farmers, whose idol he is presumed to be, by making a pesky nuisance of himself to every merchant in town, especially commission men, he deserves a crown. But in a practical way, Dillon

has about gone the limit and there is now serious talk of appealing to the law to suppress him.

Dillon's aim appears to be to disprove the efficiency and desirability of every mercantile agency and custom which experience has proved efficient and desirable. He started out by trying to run state auctions in opposition to the old-established, privately-owned but publicly-conducted auctions and to prevail on the farmers to ship their apples to him instead of to the old-line commission men. The movement fizzled after one attempt and then the movement drifted directly into the old rut.

Next he tackled potatoes but didn't get potatoes enough to make a fair start even. Then he jumped to hay and succeeded in getting considerable hay promised. But it came at the time when the railroads were having all they could attend to to take care of food products, let alone cattle feed. Besides he wanted the Lackawanna railroad to let him exclusively land 15 carloads of hay on a dock which would accommodate, for all the dealers in town, only ten carloads. And when the railroad refused his shipments at up-state points, he appealed to the Interstate Commerce Commission, claiming that it was a conspiracy of the old merchants, just as the refusal of the apple buyers to go up-state to his auctions had been, he claimed, a conspiracy. The Interstate Commerce Commission has not yet given him any relief but the hay auctions are apparently dead.

But promptly Dillon hopped into another lead, this time eggs. He proceeded to have the new statute enforced, requiring that storage eggs be sold as such and not as fresh eggs. It struck a popular chord and at last accounts a considerable degree of success had attended the plan, principally because the trade shows a willingness to co-operate.

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STATE COMPETES WITH MERCHANTS.

Then Dillon made a departure by trying to set himself and the state department up as receivers for out-of-the-state producers. He sent a circular through the fruit belts of Florida urging growers to ship to the state markets rather than to the old-time “robbers” and making lurid statements of very doubtful truthfulness as an inducement to have them do so. If he shows any measure of success in this canvass, litigation will start, it is said, by the trade leaders.

Meanwhile Dillon has been pulling the wool over the eyes of the new California State Market Commissioner, Harry Weinstock, with the intention of having that amateur official use his influence among California fruit producers to ship to Dillon in preference to their old associates. Weinstock does not know as much about marketing as Dillon does (according to the evidence of his utterances) and when he came East to get a few points as to how to run a state marketing department, he made the natural error of swallowing the Dillon stories whole, instead of talking with more experienced “authorities.” The result was a long telegram, official in character, to Governor Johnson of California and to Chairman Glass of the Fresno peach growers, in which he said:

“Investigation develops that only a limited number of Eastern jobbing houses buy California dried peaches for future delivery, thus minimizing the price received by the grower. If all the dealers could be afforded an opportunity to bid on dried peaches the price to the grower would be materially increased, therefore believe that the system of selling at public auction in Eastern markets would make it possible for a dealer to supply his needs in New York on trade terms where now he has to go to the few jobbers who can contract ahead of time by reason of their large capital to pay for their purchases and thus absorb the profit which should go to the grower.

“My investigations to date show that only the middle class consumers are using California dried peaches. Few, if any of the wealthier people, and

owing to excessive retail prices, scarcely any of the great masses living in the tenement districts of the great cities know anything about California dried peaches or apricots.

"Sales at public auction will bring better prices to the grower and enlarge volume of distribution, and this, together with a campaign of publicity educating the consumer, will lead to very greatly increased consumption. With California dried fruit products graded, standardized and labeled by the state, the product would at once command the confidence of the auction buyer and insure to growers compensatory prices and widest output."

The fallacy of this is that while on its face it states facts, it does not give the reader a truthful placing of the facts. There were special reasons why Dillon's prices at one or two apple auctions brought good prices. Again, the reasons why the bon ton do not use dried peaches are not due to marketing but because of the fact that well-to-do people like other fruits and sauces better and probably will continue to. No system of marketing will change that. The fact that better grading would improve the situation is well known and has been hammered into the packers for years past.

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TACKLES THE "MILK TRUST."

It does not appear as yet that either of these leads has availed anything, save a lot of indignation, among regular commission men that the state money should be used to build up competition for them to meet. But Dillon is still undaunted and has started a campaign against the "Milk Trust." He has come out in the newspapers with long contentions of the wickedness of the "Milk Trust," based on certain alleged findings of a "John Doe" probe of Attorney General O'Malley six years ago, and a claim of Dillon that things are as bad as ever. The unique part of his tirade is that, after he has exhausted his ammunition, he blandly states that he proposes to investigate these statements and "if" they are true, to start a prosecution. There is a general feeling in trade circles that it might have been just as well to do some of the investigating first, before making such sweeping and exciting charges.

Just because it is a fact that milk production is year by year moving further and further away from New York he concludes that it is all because the milk farmers find no money in raising milk. True, there is some such complaint among farmers, but there is strong ground to suspect that the rapid gobbling up of suburban milk farms for millionaire estates, and the rapidly multiplying burdens placed on milk production and handling by the sanitary laws are the chief cause and not the "milk trust."

Of course, if Dillon can reduce the handling costs of milk, everyone will rejoice, but his figures are hardly a fair basis for comparison, for the 3-cent price paid the farmer is for milk in 40-quart cans bulk, at his own farm station, and the 9-cent consumer price; after that it must be carefully transported, iced, bottled into glass jars, carried to the house kitchen door and sold on more or less of a credit basis—and all the time subject to the rigid rules of the health department as to temperature and sanitation—are very different questions. It is a well known fact that probably no city has better milk than New York and most of the burden of keeping it so is on the distributors; all of which does not appear in the Dillon figures. Bulk milk at almost a third of the eventual cost is not regarded as entirely exorbitant, though Dillon makes it look that way.

It is a fact that handling milk in the city requires large operating companies and there are eight or ten here which have the bulk of the business and have grown very large. But it does not appear that there is any "trust" in existence, such as there was when Attorney General O'Malley investigated things more than six years ago and which was then almost as much overdrawn as a description of general conditions, as Dillon's talks are now.

BUSINESS MEN START "PREPAREDNESS."

With men like Dillon loose in the community—to say nothing of sundry other reformers who have been causing unlimited annoyance to merchants during the last two or three years, both in the city government and the state—it has become patent to West Side wholesale merchants that "eternal vigilance is the price of safety." What can be accomplished by united effort was shown in the successful defeat of the six aldermen who aided in setting up the famous (or infamous) Marks public markets; a defeat directly traceable to the retailers' joint committee. With everything indicating that a new crop of "reforms" may be expected in 1916, it has been decided to organize permanently and keep a sharp eye out all the time against flank attacks.

Out of the old "Advisory Council" of the wholesale marketing district has been formed the "Receivers' and Distributors' Association" and it has been incorporated with George H. Stege as president and treasurer, John W. Nix and Frank A. Horne, vice-presidents, and E. P. Doyle, secretary. The headquarters of the association are located in the Matlage building. The advisory council of the wholesale market district of Greater New York officially went out of existence as soon as the new one was formed.

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"HAPPY" HARTIGAN AS AN ANTI-DILLON.

In refreshing contrast with Dillon's antics are the co-operative and educational propositions of City Weight and Measure Commissioner Hartigan. Hartigan believes that what is needed to correct any unsatisfactory conditions between the producer, consumer and distributor is a mutual understanding and less wild criticism. So he proposes that up-state farmers be invited to come to town for a week, study marketing conditions in a systematic way at first hands and then go home and adapt themselves to the existing channels. Incidentally he wants joint sessions of all interested parties, at which the various viewpoints might be discussed.

"One of the worst features of our present marketing system," said Mr. Hartigan yesterday, "is the misunderstanding that exists between the producer and the distributor. The farmer frequently knows nothing of conditions in New York City, while the wholesaler or retail merchant here has no knowledge of the producing side of the business. This naturally results in a situation where mutual distrust prevails, a situation which, I believe, could be remedied if producer and distributor were brought together and shown the limitations under which each labors. So far as I know, no farmers' convention has ever been held in this city, and I feel that it would do more than any market bill or similar attempt to control conditions here to bring about the desired adjustment of marketing in the city. The meeting which I intend to propose would cover a period of one week."

Mr. Hartigan has discussed the matter with President McAneny of the Board of Aldermen and Mayor Mitchel and proposes to frame the project up in tangible form as early in the new year as possible.

Mr. Hartigan has also decided that, in enforcing the new net weight law the thing needed is education of tradesmen, rather than prosecution. He has under the present law no less than 182,000 stores to inspect with his staff of 21 field men and he declares that the great bulk of merchants are willing to obey the law if they know what it is and how to do it. So he has started a campaign of education, in which the following steps will be taken:

"1. The bureau will send out to dealers in every kind of merchandise, retail, wholesale and manufacturers, a circular calling attention to the existence of the law and a copy of the law itself, with instructions that he may obtain further information if desired at the offices of the bureau.

"2. The inspector who examines merchandise in a store and finds that it does not comply with the net-weight-container law will leave with the merchant a circular, inviting him to call at the bureau to explain the presence of improperly marked goods in his stock. There will be no compulsory attendance. The dealer must come voluntarily. But if he fails to appear at the time specified his absence will be taken

as indicating that he violated the law intentionally, and prosecution will follow.

"3. In addition to these two features, the plan will include an educative campaign through a course of lectures, in which an effort will be made to point out to dealers that by making their merchandise properly they will be the gainers, as well as will their consumers. The chief advantage which will develop for them will be that they will no longer sell blindly, as at present, but will know exactly what they are distributing."

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FIGHT ON FAKE MERCHANDISING.

The movement to which I referred in my last letter, inspired by the Wholesale Men's Furnishing Association, to prosecute "fake merchandising" and those storekeepers who delight to sell "just as good" stuff under the guise of standard brands, has met with pronounced success in its first case. Abraham Goldstein, who has a men's furnishing store at 1679 Broadway, has been fined \$100 and given the option of paying up or going to jail. He paid up.

The action was brought at the instigation of the Wholesale Men's Furnishings Association of this city, and was prosecuted by Assistant District Attorney Heilborn. Goldstein was charged with having displayed in his window a sign which would lead customers to believe that he had Manhattan brand shirts on sale, whereas he had no such shirts in stock. The sign bore a legend that was practically a duplicate of the Manhattan trade mark, qualified by the insertion, in small and inconspicuous letters, of the word "Borough."

"This conviction marks the first step in a campaign which the Wholesale Men's Furnishings Association will wage in this city against a practice that costs the trade many thousands of dollars each year," said Willard B. Stevens, secretary of the association. "We are already on the trail of two other stores where similar deceptions are employed to gain business at the expense of dealers who stick to honest methods and expect to complete the evidence against them shortly. Prosecution will be started as soon as this is done."

"We have divided the city in sections so that the campaign can be carried on as efficiently as possible, and a prosecuting fund is being raised to meet the expenses of the investigation. These stores thrive by getting the customer inside the shop and then forcing upon him merchandise that has probably been made of inferior material in a sweatshop. Without the lure of the trade-marked article in the window their business would fail, and they know it. Consequently they resort to all kinds of trickery to gain the customer's attention. Naturally the honest retailer cannot compete against these methods, and we are going to stamp them out."

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STILL FIGHTING FOR FREE RAW SUGAR.

Frank C. Lowrie, champion of the Seaboard sugar refiners of the East, is still pushing his propaganda to persuade the Washington administration to let the free sugar clause of the Underwood tariff operate and not restore the import tax as proposed by Secretary McAdoo. As stated in this correspondence some time ago, Lowrie's plan is to secure the needed revenues by a consumption tax, payable at the refinery door; a plan which would affect imported cane, domestic cane and beet root users alike and not favor the home-grown raw material.

Lowrie has issued a letter to President Wilson, the cabinet, and every member of Congress in which he makes this statement:

"If, because of extraordinary expenditures, it is now decided that sugar must be taxed for the purpose of revenue, then the Democratic party, which passed the free sugar bill, will find a perfectly consistent and equitable measure in the adoption of a revenue tax on all sugar consumed."

"Such a tax of 1 cent a pound would yield \$84,000,000 annually and would not increase the price of sugar to the consumer any more than the present tariff. Practically all European countries adopt this means of raising revenue. This method provides that the Government shall receive the entire amount paid by the people instead of its being shared with the domestic producers, as is now the case."

"If the German tax of 1.51c a pound were levied in this country it would yield \$126,000,000 and increase the cost to the public but ½c a pound; the Belgium rate of 1.75c would bring in \$150,000,000 with an increased cost of only ¾c a pound; the French tax of 2.35c, \$200,000,000, raising the price to the consumer 1.35c a pound, and the Austria-Hungary rate of 3½c would yield \$300,000,000 and advance prices 2½c a pound."

"Our present tariff increases the price of sugar to the consumer over 1c a pound and yields but \$38,000,000 in net revenue. This shows how faulty our means of raising revenue is as compared with the European method."

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EUROPE'S SUGAR PURCHASES.

Claus A. Spreckles, president of the Federal Sugar Refining Co., is authority for the statement that American sugar refiners thus far in 1915 have sent to England and the Continent something like 350,000 tons of refined sugar, valued at perhaps \$35,000,000, and in addition Europe has taken nearly the same amount of raws direct from Cuba, while Canada has also made direct purchases of Cuban raws.

This is said to explain and amply justify the advance in prices of late, leaving sugar in an especially strong statistical position. Refiners declare that dealers have been slow in realizing the strength of European demand and failed to stock up, with the result that transactions are more nearly on a strict spot basis than general; in fact than in many years past.

"Usually at this period of the year," says Mr. Spreckles, "sugar prices decline because of the coming new crop shipments from Cuba and the receipts of domestic beet sugar. This fall, however, the beet people have not forced their sugars on the market, and therefore have not depressed quotations."

"Their forbearance at this time is based largely, of course, on the hope of an extension of the sugar tariff, which is scheduled to be removed May, 1, 1916. The beet interests are selling their sugars today at 5.75 to 5.80 cents a pound, whereas a year ago they were glad to get about 4.90c. This shows how their foresight is reaping its reward, for the beet crop is the largest of record, yielding 750,000 tons of sugar."

"I believe 1916 will see much higher sugar prices than now prevail, because the United States will have to supply practically all of Europe with refined, besides replenishing the low stock here and taking care of the normal increase in consumption at home."

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CUBAN SUGAR TRUST FORMING.

Wall street interests, realizing the strong outlook for Cuban sugar after the war, are reported to be framing up a scheme for the consolidation of all the plantations in Matanzas province and a common rumor has it that the first issue of stock will be \$50,000,000 cumulative 7 per cent stock and 500,000 shares of common stock of no par value. It is believed that the preferred stock will be offered at par with a bonus in common stock. J. & W. Seligman & Co. are forming the combination and it is learned that J. P. Morgan & Co. and the Guaranty Trust Company are also interested in the project. The Cuba Company, which was organized by the late Sir William van Horne of Montreal, E. J. Berwind and H. P. Whitney, may figure in the deal. But those who are usually well informed claim that it is planned to include all the prominent sugar plantations in the Province of Matanzas. Among the companies that are mentioned in local sugar trade circles in connection with the consolidation are the Central Mercedes Sugar Company, the Stewart Sugar Company, the Socorro Sugar Company and the Cuanjal Sugar Company.

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BIG SALE OF CALIFORNIA FRUIT.

Seldom has there been a more satisfactory season for marketing California deciduous fruits in this market than this year, the close of the season making the best "clean-up" on record, both in completeness and in the prices realized. This has been particularly true of the grape industry, especially Emperors and Cornichon varieties.

Heretofore such grapes have had to be sold before the frost because they would not keep in crates and paper and the end of the season has found growers up against rapid depreciation and forced sales that often spelled loss for them. But this year the growers have been experimenting with sawdust for packing the grapes, in much the same way the Spanish grape growers ship their product. This made the goods attractive to buyers, who can store the goods on a speculative basis and, instead of the growers having to "hold the umbrella" the buyers are willing to do it for them. The result was a lively sale and good prices.

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EUROPE BUYING DRIED FRUIT.

The European demand for good and cheap fruits for sauces has forced an unprecedented demand on this country for California fruits of all kinds. Prune sales are quoted at almost 100,000,000 pounds, or something like half the California output, while lately dried peaches have been going abroad at astounding figures aggregate rates.

Though England and several of the other northern European countries have for many years been buyers of California prunes and apricots, these foreign markets have until this fall bought only small quantities of peaches. Sales that have been made within the past thirty days to European purchasers have passed all previous records.

In response to this heavy foreign demand, the American markets, which, until less than two months ago, found themselves able to secure dried peaches at prices that were in many cases reported to be actually below the cost of production, are now paying very high prices for supplies of this product, and packers are advancing their prices for future shipment from the Coast.

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GOVERNMENT CONTROL OF STORAGE.

At the recent convention, in this city, of the American Warehousemen's Association, one of the most interesting propositions considered, especially by the Cold Storage section members, was the desirability of placing warehouses under the direct control of the Government. Strange to say, the bulk of the opinion appeared favorable to the scheme, though no tangible action was taken on the subject. It was agreed that regulation of warehouses is growing so fast as to suggest ultimate common practice, and rather than have it come as unwelcome legislation, the warehousemen feel that they can do a good turn to all concerned by promoting intelligent laws and regulation. Two propositions were advanced: that the warehouse be placed under the jurisdiction of the Interstate Commerce Commission; the other that it be managed by separate state commissions.

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AFTER PATENT MEDICINE SALES.

City Food Commissioner Lucius P. Brown, on whom has fallen the responsibility for putting into effect the so-called "Goldwater patent medicine ordinance" on the first of January, is planning for a campaign which promises to make lively times not only in the retail drug trade but also among such retail grocers as handle patent medicines or other alleged curative compounds.

The ordinance, which was drawn and enacted at the behest of the recent Health Commissioner, Dr. S. S. Goldwater, requires that any curative compound sold at retail must bear on its label the ingredients and formula, or else the formula must be filed with the Department of Health, held secretly but as the basis for supervision. It is to be operative on the first of the year and Commissioner Brown has detailed a hundred inspectors to go through the stocks of every one of the 2,500 retail druggists in this city and affix stamps legalizing such preparations as comply with the law.

Of course, the ordinance cannot interfere with goods sold interstate or by mail (which is under Federal protection), nor will it affect goods sold outside the city limits in adjacent towns. But it is thought that it will be effectively enforced here and if it is there will be "something doing," according to the officials of the Proprietary Association of America. This organization has been fast getting its own

house clean, so far as fake products made by its members are concerned and it is said that the first time the city seeks to make an arrest under the Goldwater ordinance, proceedings will be started to enjoin the authorities, on constitutional grounds. It is said that the manufacturers have determined to make a stand, even into the Supreme Court at Washington.

First of all, the manufacturers and druggists are not all certain that the filing of their secret formulæ would be as secret as claimed by the Health Department and they are reluctant to take such long chances. They claim they cannot be made to do so under the state and Federal constitutions. Again, it is contended that the consumer has a right to purchase whatever remedies he likes to cure his own ills and they strongly hint that back of the Goldwater ordinance is a movement on the part of the regular practitioners to prevent any scheme of treatment which does not give them a chance for fees. It is said that one of the local medical societies sent emissaries among retailers urging them to hang up signs reading, "We do not recommend patent medicines; many of them are harmful. If you are ill consult your physician," and persuaded many of the stores to hang up the signs. It is claimed that the same propaganda can be shown to have inspired the Goldwater ordinance and the druggists and manufacturers are ready to fight it out on that basis.

On the other hand, Commissioner Brown states that about 300 manufacturers have already filed their formulæ for registration and scores of retailers and manufacturing druggists have done the same.

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DR. WILEY BEATS "GET SLIM."

Dr. Wiley has lately been defendant in a \$50,000 libel suit here brought against him by one Mrs. Jean Downs Abernethy Bishop, a well known "reducer" of corpulent women. A jury in the Supreme Court, however, after listening to testimony for three days, decided that the Doctor had told the truth when he declared her "Get Slim" stuff was injurious and worthless for its reputed purpose.

It appears that a Yonkers woman bought some of the preparation which was to restore her to lithesome proportions, but her doubting husband sent it to Dr. Wiley to analyze. The Doctor claimed that it comprised nothing but citric acid, sugar and coloring matter and claimed that citric acid was harmful, also useless for reducing fat. Mrs. Bishop sued the Doctor, claiming that it had reduced her own weight and that of other people and had not proved injurious; also that it was not citric acid but tartaric acid. The Doctor claimed that that was even worse and said the only way it could induce slimness was by deranging the digestive organs to a state of ill-health and mal-nutrition.

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DOOLITTLE PUTS "PEP" INTO HIS WORK.

Inspectors in Dr. Doolittle's staff at the New York Laboratory of the Bureau of Chemistry caused a sensation in the spice trade recently by holding up an importation of 25,000 bags of Lampong black pepper on the charge that it was adulterated, because it contained what is claimed to be an excessive amount of dirt and foreign matter. The pepper arrived via the steamer Gorontalo and Dr. Doolittle conducted the hearing a week later.

John Clarke, of John Clarke & Co., prominent brokers in the local spice trade, appeared on behalf of the grocery importers and spice grinders. He maintained that the pepper importations temporarily held up did not contain any unusual quantity of foreign matter and insisted that further tests would show that the shipments should be released.

Dr. Doolittle reserved decision at the conclusion of the hearing, but later admitted the shipment, after further tests had been made. The 25,000 bags of pepper tentatively held up are valued at approximately \$350,000. Those who saw the shipment declare that it was no different from hundreds of similar shipments, all of which have a liberal proportion of dirt, as a result of the inefficient methods practiced in countries of origin.

WHY SACCHARIN WON

The Long, Contested Suit of the Monsanto Chemical Works of Saint Louis, Manufacturers of Saccharin, Is Finally Decided in Its Favor.

The Supreme Court of the State of Missouri in handing down its *unanimous* decision that Saccharin is not deleterious to health, and declaring null and void the statute prohibiting its use recognized the principle that the amount used must be considered. This, the Supreme Court of the United States also did in its decision in the famous Bleached Flour case.

An excessive use of anything is harmful, whether it be sugar, salt or water.

SACCHARIN is much more desirable than sugar as a sweetening agent for soft drinks from any view point: (First)—Healthfulness; (Second)—Economy.

In using SACCHARIN the danger from the use of sugar is eliminated, and the infinitesimal amount of SACCHARIN that is required to sweeten cannot possibly be harmful to any one, either adults or children.

Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

Use SACCHARIN to sweeten and do not hesitate to declare its use on the label. **Such declaration stamps your goods as being healthful.**

MONSANTO CHEMICAL WORKS

Manufacturers of Saccharin

ST. LOUIS

Branch: Platt and Pearl Streets, New York

THE FLOUR SHORTAGE.

The shortage of flour in the city of New York and vicinity, to which I have referred in my last letters, has not only grown no better but on the contrary even more serious; so serious that the railroads have started emergency measures to force flour through in preference to other freight and are sending tracers over their routes, picking out cars of flour held up in side-tracked trains and detaching them for preferential forwarding.

The Pennsylvania and Lackawanna lines came to the rescue with an emergency order refusing to accept flour for export, in order that whatever cars of flour are received might come forward for domestic needs, and other roads took similar action. The whole trouble appears to be in the clean-swept warehouses, which have absolutely no flour stored and every barrel arriving is snapped up an hour after its arrival, to supply crying needs.

That the bakers throughout the city, big and little, are seriously handicapped is no longer denied. Not once, but many times within the last month have big baking establishments come within an ace of closing down owing to lack of flour. Some small bakers, it is asserted, have gone so far as to use the lower grades of flour.

Representatives of the big milling concerns believe there is no reason to fear an actual famine in case of any breakdown on the part of the railroads through a blizzard, a strike or any other interference with the movement. While it is true that there is practically no flour stored on the Jersey City and Weehawken piers for domestic account, there is a large amount awaiting export, and, although this is all entered on through bills of lading, the exporters declare they would not hesitate to divert it to domestic account in an emergency.

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DUTCH FISHERMEN IN LUCK.

Reports from Holland received in this market not only announce the closing of the herring fishery of that country but also that the herring fishermen there have reaped a golden harvest this year out of a record catch of fish. It is said that in normal times the catch brings \$8 to \$10 a barrel at the wharf and in a scarce year as high as \$15 or \$16, but this year prices of from \$20 to \$29 have ruled as fast as the fish could be landed and that on a record catch.

With the belligerent countries bidding against each other in the effort to secure stocks of fish that were brought to port by the large fleet of fishing boats operating in the North Sea, the fishermen found that they were in a position to name their own prices, and heavy stocks were reported to have been disposed of at fabulous figures. The prices received are said to have been higher than they have ever been before in the history of the industry.

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WHAT IS A SARDINE?

And still the greatest legal minds of the world are trying to discover "What is a sardine?" Late advices from Europe show that the King's Bench Division of the High Court of Justice at London has concluded that the "Norwegian sardine" is an imposter and that his right name is "Norwegian Spratling." All of which reverses the former decision of the General Quarter Sessions at Clerkenwell, rendered some time ago.

The decision is regarded as important because it is likely to operate as more or less of a precedent in case the issue is raised in this country—and it probably will be if some of the hair-splitters get in their work in the customary way.

"It seems to me," said Lord Reading in the decree, "that the whole object of this statute was to protect the public against descriptions which might be given by the trade or by members of the trade which were false. Amongst the members who were carrying on the trade before 1887, these Norwegian sprats or bristling were described as 'Norwegian Sardines.' One may very well pause to inquire: Why were they described as sardines? Obviously it is a term which lent

itself to a very ready sale, and those in the trade preferred to call Norwegian sprats 'Norwegian Sardines,' and they preferred to call them by that name because they got a better sale because people did not know that they were buying Norwegian sprats."

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ROULSTON STORES ON "ECONOMY" BASIS.

The Roulston system of retail stores in Brooklyn has announced its adoption of the "economy" plan of operation for its whole chain, save that it has not abandoned free delivery to the consumer. In a long price list, in which well-known specialties are quoted at from 15 to 20 per cent under list prices, it states that "Beginning Monday, November 15, all our stores will be conducted on our 'every day economy plan'; no more extra stamps or premiums of any kind. We have eliminated every item of expense that it is possible to do without, in order to sell you groceries at prices you never bought them for before. We are bound to kill the high cost of living.

"All our stores in Brooklyn and Queens will open at 7 a. m. and close at 7 p. m.; Saturday closing hour 11 p. m. Close every day for lunch from 1 to 2 p. m." According to the Brooklyn directory, there are 166 stores in the Roulston system.

* * *

BOSTON JOBBERS MERGE.

Reports from Boston indicate the merger on December 1st of two well-known pioneer wholesale grocery stores of that city, the Wason Company, of which George B. Wason, former president of the National Wholesale Grocers' Association, is head, and the William Stearns & Co. The Wason firm was established in 1837 and the Stearns company in 1832. For many years they have been next-door neighbors, the Stearns Company having occupied the same location since its formation over 80 years ago.

* * *

JOBBERS DISCOUNTING BILLS.

Former Governor B. M. Fernald of Maine, one of the best known packers of that state, in a recent market advice gave a bit of testimony that is not escaping public attention, as to the flourishing condition of the grocery trade of the country. He says, in part:

"One feature of the business which has not escaped my attention is the fact that from some cause or other jobbers have been more prompt in taking their discount this year than ever before in my experience of thirty years in business. There has been a gradual advance in this direction for the past few seasons, but this season most jobbers have not only taken advantage of the 1½ per cent discount allowed for cash in ten days, but in 70 per cent of the business turned out of Maine jobbers have passed their checks for invoices so that they have been received by the canners inside of the ten-day limit.

"I am glad to speak of this, because the subject has been discussed at great length in both the Wholesale Grocer and the National Canner conventions. There is no reason why this should not be so, but I believe the Wholesale Grocers' Association has been the means of bringing this about."

U. S. NOW HAS DYES AND DRUGS.

Dr. Raymond F. Bacon, director of the Mellon Institute of Industrial Research of the University of Pittsburgh, in a speech recently said that the hundred most essential dyes and the hundred most needed drugs the supply of which had been cut off by the European war are now being produced in the United States. He said America did not intend at present to make the thousands of coal tar dyes and medicinal products that have been made in Germany, but the most important ones would be manufactured here.

As an instance of the rapid growth of the chemical industry in this country he said that four companies have been formed recently in the Pittsburgh district and that two of the plans already have been opened.

Help Your Salesmen !!

To Increase Their Efficiency and Profits !!

To Make More Money for the House and Themselves !!

Present them with a copy of "HOW TO BUY AND SELL CANNED FOODS", written by J. A. Lee, a practical man, for the use of practical people, and a year's subscription to this magazine. It is a practical training course in general salesmanship.

When you add to the practical knowledge and selling ability of your house salesmen, and traveling salesmen, you present them the most valuable gift you can obtain. You at the same time make them more valuable to their employers.

Order for each a copy of this interesting and practical book which has subscribers all throughout the English-speaking world. It is the only book ever written on the subject, and has found its way to the desk of nearly every expert buyer and broker in the canned foods line in the United States and Canada and is used by the United States Government in its Commissary Department at West Point, New York and elsewhere.

It has subscribers among the canners and wholesale grocers of England, Australia, Hawaii, Alaska and elsewhere. The very largest wholesale houses use it.

We have arranged to supply the book (regular price, delivered, \$2.15) and a year's subscription to this magazine, THE AMERICAN FOOD JOURNAL, for the price of the book alone, viz., \$2.15, but the money must accompany the order.

The book will be delivered by express immediately and a receipt mailed for a year's subscription to this magazine at once. If individual checks, or local checks, are mailed include the exchange, as we cannot afford any concession on this proposition.

THE AMERICAN FOOD JOURNAL

15 South Market Street,

CHICAGO, ILLINOIS

Apple Market Investigations for 1914-15

By CLARENCE W. MOOMAW

DURING the season of 1914-15 the Office of Markets and Rural Organization studied certain phases of apple marketing and distribution. This work began with an investigation of commercial apple crop conditions, and when the marketing season opened in September investigations were made in the orchard district of New York state and in the apple markets of New York City, Buffalo, Chicago, Milwaukee, Detroit, St. Paul, Kansas City, St. Louis and Louisville.

In the height of the season an investigation of the movement of cold-storage apples was initiated, and this investigation extended throughout the entire season, with the monthly publication of information regarding the marketing of storage apples.

This bulletin, therefore, is not a comprehensive treatment of the subject of apple marketing, but rather is a report of such investigation as the office could carry on in its present stage of development.

A study of the commercial crop conditions throughout the summer of 1914 revealed the fact that the country would produce one of the largest apple crops in its history. Information in this respect was secured by the office from special correspondents in the commercial orchard districts. Remembering that the total production far exceeds the market surplus, especial distinction was made in gathering information. It is generally thought that the market surplus or the commercial crop ranges between 40 and 50 per cent of the total production in ordinary years. The results of investigations conducted by the Bureau of Crop Estimates indicate that 41 per cent of the 1913 apple crop and 38 per cent of the 1914 crop were "shipped out of counties where grown." Formerly the estimates of the Department had been made in terms of percentages. However, in compliance with a demand for such information, the Bureau of Crop Estimates issued in terms of bushels its first quantitative report in August, 1914. The information published was secured from the Bureau's crop correspondents located throughout the United States, and related to total production only.

With the opening of the European war it was not thought that the United Kingdom and the Continent would draw their usual supply of American apples, and a severe decrease in export demand appeared to be so imminent that the Office of Markets and Rural Organization issued a warning to growers and shippers, advising them to be exceedingly cautious about shipping apples to seaboard for export, unless steamer space and a certain demand on the other side were assured. The general trade forecasts gave the impression that the European markets were not to be counted on seriously as offering an outlet for a large amount of apples. In the past the influence of English and continental markets upon conditions at home have been strong, although the quantity of fruit shipped is not large as compared with the market surplus, and when it appeared that the European outlet would be closed a serious depression ensued.

The most serious effect of the war upon the business conditions which preceded the movement of the crop and which followed throughout the marketing period was a contraction of credits in the United States and a resultant lack of confidence on the part of the trade. The South, which consumes a large quantity of apples, was especially restricted in credits, owing to the condition of the cotton market. Combined with the prospects for a very large crop of apples these business conditions created directly or indirectly by the war caused a depression in opening values; but really, as may be shown later, this depression may have been very beneficial for the reason that the market opened on a low level, thereby creating an unusual consumptive demand for the fall and winter months.

The results of the investigations that preceded the movement of the crop were published in the *Agricultural Outlook* of September 16. In that connection, practical suggestions

were made for the proper handling of the crop, including a general forecast of market prospects.

One of the investigators visited the orchard district of New York state. This section had suffered from excessive rains, with the result that the Greening crop had been badly damaged by a fungus and it was feared that the Baldwin crop would suffer likewise. Speculators and operators were paying the farmers at this time for such varieties as Greening, Baldwin, Spy, etc., \$1.35 to \$1.50 per barrel f. o. b. loading station. This was for New York A grade (2½-inch minimum) fruit, packed and branded in compliance with the New York state law. The B grade (2 to 2¼ inch minimum) of these same varieties was bringing \$1 to \$1.25 f. o. b. loading station. For King, farmers were receiving \$1.75 to \$2 per barrel for A grade fruit, and \$1.50 for B grade. These prices were for barreled apples f. o. b. cars or delivered to the storage houses.

The following estimates were given as the expense incurred in picking, grading, packing and marketing a barrel of apples: The standard apple barrels cost 40 cents each; pickers received 15 cents per barrel of loose, unpressed, ungraded fruit. It cost 10 cents per barrel, piecework, for grading and packing, and 5 to 10 cents for hauling from the orchard to the loading station or storage warehouses, the total expense being 70 to 75 cents per barrel.

As a result of the defects caused by rainy weather and also because of the grower's fear of not being able to pack according to the New York law, large quantities of fruit were being sold to buyers who shipped it in bulk to the consuming markets. Growers were being paid 50 cents per hundred-weight for this fruit delivered on the car. Most of the buyers specified that the fruit be 2 inches minimum in transverse diameter. Many cars, however, contained ungraded fruit, and much worthless stock was sent to market. The marketing of fruit in this manner would have been thoroughly good business had the inferior portion been left at home. In many cases such stock had to be discarded at destination and as a result the returns from the sale of the merchantable grades were reduced materially by the cost of shipping and handling the unmerchantable fruit. It cannot be said that the consumer paid more for good apples, because the wholesale buyers as a rule discount sufficiently the price paid to the farmer so that all costs and other losses for handling this character of mixed stock will be met.

The operation of the New York standard package and grade law was noted especially, and information regarding its results will be found on page 13.

The mediums through which apples usually pass in the large markets are the wholesaler, jobber and retailer. In the case of consignments, the sales are usually made by the commission merchants to the jobbers. Frequently a wholesaler, mission merchant, or jobber performs the functions of all three, so that there is no distinct line which apples may be said to take in process of city distribution.

Growers east of the Rocky Mountains form market contacts in many ways. Frequently the original sale is made at the orchard to local or itinerant buyers, who sell to large operators or city dealers. The brokers in the producing areas and in the market centers do a large business as salesmen or purchasing agents for all those engaged in the distribution to retailers. Such are the usual steps when the growers act individually. Collectively or co-operatively short cuts are possible, because through organization all the growers of a community may make direct market contracts with the city dealers.

In those markets where investigations were carried on an effort was made to trace the distribution of specific lots of apples through to the consumers in order to observe the various steps and ascertain the cost of handling, including trade margins. It proved very difficult, however, in most cases, to trace the whole of any original shipment through

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The discussion about using starch in Compressed Yeast has reached the point in the United States of a decision forcing those who used it to declare the fact on the wrapper or label.

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In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

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CHICAGO, ILLINOIS

to its final sale to the consumer, and the larger the city the more difficult the tracing.

It is easy to trace wholesale lots from the shipper to the wholesaler, but just as soon as the lot is broken up the record of its disposition becomes more difficult to obtain. The wholesaler may sell to the jobber or to the retailer or perhaps direct to some large consumer. He will probably have a record of the sale to a jobber, but many of his sales to retailers are likely to be in small quantities, for cash, and without record of the purchaser. The jobber, in turn, may sell either to a retailer or to a large consumer, and a very large part of his sales are likely to be for cash, without further record. It is possible, therefore, to follow only a small part of the shipment even so far as the retail dealers. Further, a considerable part of the retail business is handled by hucksters, from whom it is difficult to get much satisfactory information with regard to sales and expenses, even if it were possible to find out from the wholesaler or the jobber what particular hucksters had purchased the apples that were being traced. And, in addition to the lack of records on the part of the dealers, one problem is often complicated by the fact that in some cities half a dozen nationalities may be represented in those receiving parts of a single original shipment. This is especially true in New York City.

In studying the various phases of city apple marketing, special attention was given to retail methods and costs. The purpose of this study was chiefly to learn whether the wholesale supply controls the price. The cost of operation as a factor in determining retail prices also was investigated as far as possible.

Retail apple distributors may be classed as follows:

- (a) Fruit-stand vendors.
- (b) Fancy grocers, fruiterers, etc., catering almost exclusively to high-class or fashionable trade and doing a very extensive credit business.
- (c) Grocers catering to a cheaper class of trade, largely upon a cash basis.
- (d) Hucksters or street peddlers.

Relatively high prices were charged for apples purchased at fruit stands. Extra fancy Northwestern and Colorado Jonathans were sold to the dealers during October and November at prices ranging from \$1 to \$1.25 per box. Apples which grade 150 to the box retailed at 2 for 5 cents, or \$3.75 per box. This meant a gross profit of about 250 per cent. In the 96 size, extra fancy Jonathans sold at 3 for 10 cents, or \$3.20 per box, showing a gross profit of about 200 per cent.

In the East Side tenement section of New York City it was learned that by reason of the cheap prices prevailing and the heavy supply of apples arriving the peddlers were operating to the detriment of fruit stands. The fruit-stand dealers were selling only about one-third to one-half the quantity of fruit handled in former seasons. The pushcart and wagon peddlers as a rule buy packed or loose fruit cheap and go direct to the homes of the residents, selling at prices considerably below the fruit-stand men. The peddlers handle a large quantity, make quick cash sales, and pay no rents. Other dealers incur heavy operating expenses and generally sell not for the purpose of moving a large quantity, but for the highest price obtainable. Consequently, the movement is restricted.

The largest profits were found usually in barreled apples. For instance, New York B grade, 2 inches minimum, approximately 600 apples to the barrel, sold for a cent each or \$6 per barrel. These apples cost the retail dealer not over \$2 per barrel delivered to his store, allowance being made for jobber's profit and drayage. The investigator saw "A grade" fruit, 2½ inches minimum, averaging about 400 apples per barrel, which cost the retailer not over \$3, being displayed for sale at 2 for 5 cents, or \$11.25 per barrel. Such prices prevailed at no less than 25 retail stores visited in one day. Apples were being offered for sale at retail all over New York City at prices ranging from 1 cent each at the cheap corner fruit stands, to 50 cents and 80 cents per dozen at the fanciest fruit stores.

In general, it may be said that the gross profits of fruit-stand vendors range from 100 to 250 per cent. Operating ex-

penses other than rent in most cities except New York are not relatively high and all sales are on a strictly cash basis; hence the net profits on good fruit are large.

Grocers catering to high-class trade buy only the best apples. Extra fancy Jonathans, Grimes, etc., preferably 138's and 150's size, were purchased at \$1 to \$1.25 per box. These apples were taken from the box and repacked in small splint trays similar to the peach basket used in a six-basket carrier. Each box of apples filled approximately 10 trays. Each tray sold for 30 cents; hence the box brought \$3, representing a gross profit of about \$1.75. Extra fancy Delicious and Winter Banana, 72's size, purchased at \$2 per box, retailed at 5 cents each, or \$3.60 per box. Other sizes and varieties brought corresponding prices. No attempt was made by this class of grocers to stimulate consumption by temporarily reducing prices.

The retail prices quoted above were maintained consistently throughout the 1914 season, regardless of prevailing jobbing prices. The large margins charged by the retailers, for the most part, were due apparently to the small amount of business handled, the perishable nature of the commodity, and the cost of operation.

An elaborate and efficient delivery service must be maintained by the grocers, and many small deliveries are made each day at an actual loss to the dealer. A large proportion of the grocery-store patrons buy on credit and pay when it becomes convenient. Many of these accounts are never paid. Hence it becomes apparent that the good customer who pays his bill regularly each week, or who pays cash, must suffer for the shortcomings of others. However, there can be little doubt that reducing prices would materially increase consumption and in the end result in equally good profits for the retailer. Reduced prices and better business practice should prove to be very beneficial to grower, dealer and consumer.

The profits derived from the sale of cheaper grades of apples to the poorer class of consumers are not so large. It was learned that those catering to such trade operated on a margin of 75 to 100 per cent of the purchase price.

By keeping prices at a rather high level, the stores move only a small quantity each day. Considering the fact that overhead and operating charges are not so high as in the case given above, and that there is a greater proportion of strictly cash trade, it appears that the margin of profit is rather great. It is reasonable to believe that sales could be made on a very much closer margin and still offer ample protection and profit to the dealer. These grocers, however, seem to prefer handling small quantities rather than moving large quantities upon small margins.

The peddler and pushcart men truly may be called distributors. These dealers are large factors in creating a demand for fruit. They make an effort to find customers and by so doing dispose of a large quantity. As a rule, they handle only the poorer grades, buying extra fancy and fancy boxed apples only when the price is extremely low. This year they handled more box apples than ever before, and the margins were small. The circumstances under which they work enable them to make a close price, and it seems certain that any reduction they could afford to make would not affect materially the rate of consumption. In general, it appeared that retail apple prices were too high this year, and there is little doubt that the amount used would be increased greatly if grocers would buy in larger quantities and sell at a price sufficiently low to attract public attention.

In a middle western market there is a chain of retail stores which handle apples in a very original manner. They sell for cash, make no deliveries, and have no telephones in their stores. Their plan is to sell a peck of apples proportionately as cheap as they could sell a barrel. The concern publishes a weekly newspaper which in one week had a circulation of 26,000 copies. In this paper they advertised the commodities on which they would make special prices. On November 4, 1914, they quoted "Excellent cooking apples," which cost them about 10 cents, at 15 cents per peck. This company moved a large quantity of fruit through their various stores at low prices, made a profit of about 50 to 60

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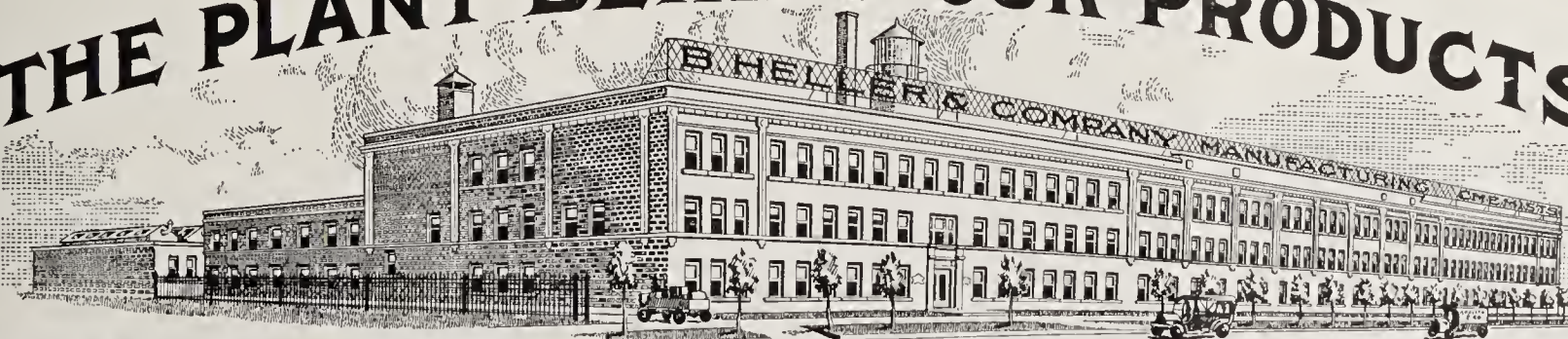
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According to Department of Agriculture Bulletin No. 118: Apply 0.62 pounds Borax to every 10 cubic feet of manure. Apply Borax particularly around edges; sprinkle with 2 or 3 gallons of water. This treatment should be repeated with each addition of fresh manure. Flies lay their eggs in fresh manure. Borax prevents their hatching.

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cents a barrel, and enabled the consumer to buy far below the usual retail prices.

The investigator also secured the record of sale of 118 barrels of apples through 5 and 10 cent stores. The complete distribution of this lot from grower to consumer is given in Table 2.

It will be noted that the 5 and 10 cent stores handled this fruit for 21.8 per cent of the consumer's dollar. A large Pacific coast growers' organization, in its efforts to secure a record of the distribution of the orange consumer's dollar, secured reports covering the market prices of oranges for a whole year. When these reports were tabulated it was found that 33½ per cent of the orange consumer's dollar remained with the retailer. So it would appear that through distribution conducted as in the case given above a saving of 11.53 per cent can be effected, it being granted that apples and oranges are retailed in a similar way.

It can be truly said that most markets can always find use for a good quality apple, no matter what its shape or the color of its skin may be. It is probably unreasonable to say that one market will take only certain varieties while another will take other varieties. Conditions are always changing preferences. For instance, due to low prices, there was a noticeably increased demand in some cities, known as barreled-apple markets, for box-packed fruit. The certainty of securing uniformly sized, highly finished fruit at extremely low prices was the only reason given for this condition.

To illustrate how a market takes a new apple, it may be stated that on October 27 two cars of extra fancy northwestern boxed fruit of little-known variety sold to the retail trade at 75 to 85 cents in one of the markets. Three days later apples of the same grade, pack, and variety were selling well at \$1.25 because they had become better known. It must be said, however, that markets do not usually exhibit such quick action in taking up new varieties of fruit. A new variety must have exceptional merit to cause a market to act as quickly as in the above case.

As has been mentioned previously in this publication under "Market preferences," some cities are known as boxed-apple markets and some as barreled-apple markets. Other cities or sections are known as good markets in which to dispose of bulk apples.

Every community, be it known as a boxed, barreled, or bulk apple market, has different classes of consumers who demand different classes of fruit. In New York City, for instance, there were received from various apple-producing sections from October 19 to November 21, 1914, 1,882 carloads of barreled apples, 383 carloads of boxed apples, and 433 carloads of bulk apples, or a total of 2,708 carloads of apples for a period of 28 business days. It cannot be stated, however, that this proportion would apply in New York City throughout similar apple seasons.

Detroit was receiving such heavy supplies of bulk fruit from the Michigan orchards, and it was selling so cheaply, that western and northwestern growers were practically unable to make any sales in that market. It will be noted that 8 cars of box-packed apples were all that Detroit handled. New York received an average of 96 carloads of all classes per day. It must be remembered, however, that New York is a large export market. All of these apples came direct to the New York terminals, part going into immediate consumption, part into cold storage, and part being exported. In most cases the fruit exported from the port of New York, however, was billed direct, origin to destination via New York City, and these cars were not recorded as having been received by the local freight offices.

It was interesting to note that the boxed fruit this season went to all classes in New York City, rich and poor alike, while in normal seasons only the rich and moderately well-to-do middle classes could afford to purchase such fruit. This condition existed also in other markets, and the extremely low price at which boxed fruit sold this year was the cause of this condition. Well-graded and highly-colored barreled fruit also reached this same class of trade. Low grades of barreled fruit and all bulk apples went to the pie men and the poorest people.

Knowledge of the requirements, customs, and changing conditions of the market is most important in selling apples. The growers can acquire this knowledge best through efficient co-operative organizations, with capable sales managers in charge.

An effort was made in some of the markets visited to study the movement of low-grade apples and the general effect of such movement on the apple market in general. Judging from observations made from September 15 to December 5, inclusive, and the statements of large apple dealers, the investigator in the Chicago market found that approximately 25 per cent of carlot bulk arrivals, equivalent to about 350 carloads, and 10 per cent of the contents in barreled shipments, equivalent to about 160 carloads, or a total of about 510 carloads of the apples received, were so poor in grade and quality that they would not have brought freight charges had this kind of fruit been received in straight carload quantities.

Those farmers shipping apples to Chicago that season would have saved the cost of their barrels and the packing, loading and part of freight charges had they eliminated the poor fruit. They also would have relieved their market, thereby giving the good stocks an opportunity to net a reasonable and profitable return.

Similar conditions were found to obtain in Louisville, Ky., where a large portion of the bulk apples received were bruised and covered with mud or otherwise soiled, showing that the fruit either had been blown off the trees or else had been shaken off by the grower. Such apples also showed decay.

In one instance the commission merchant to whom was shipped a car of inferior York Imperial apples, which arrived at Louisville about November 16, 1914, wired the shipper that he could not handle them advantageously, and the consignment was delivered to another dealer. The apples were sold "for grower's account" at 40 cents per 100 pounds. The railroad waybill indicated a total weight of 19,000 pounds, and the statement of sales is as follows:

Gross sales, 19,000 pounds, at 40 cents per hundred-weight	\$76.00
Freight	\$52.00
Commission for selling, at 10 per cent	7.60
Total charges	59.60
Net proceeds	16.40

It is seen that this sale netted the grower just \$0.0863 per hundredweight, an amount which barely paid the cost of assembling the fruit for shipment. Moreover, the purchaser of the car lost about 25 barrels on account of decay.

Plate I shows the contents of one barrel of apples inspected and regraded by the investigator in New York. The fruit was supposed to be strictly No. 1 grade, 2½ inches minimum in transverse diameter. The larger pile, representing about two-thirds of the barrel, were true to grade. The smaller pile contained culls. The investigator had no trouble in finding this barrel of apples, and could have found others just as poorly graded. The condition of the original pack indicated ignorance, carelessness, or "sharp practice" on the part of the packer.

Some cars of apples inspected in the markets visited showed softness and decay. It was thought this was due to lack of refrigeration, poor ventilation, or poor grading of the fruit itself before being packed and loaded on the cars.

Of the three classes of fruit (boxed, barreled and bulk) consigned to the markets, the box-packed apples usually arrive in the best condition. This class of fruit is usually well graded and tightly packed, thus giving assurance of its carrying well. The principal fault found with box-packed apples (especially the Jonathan variety) during the 1914-15 season was that a large percentage of the shipments arrived in over-ripe condition. At first it was thought that this may have been due to shipping this variety without refrigeration during the warm weather of the early fall months in order to save refrigeration costs. It was learned, however, that weather conditions and failure of the grower to gather the fruit at the proper time caused the Jonathans to be overripe at time of shipping.

(To be continued.)

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the child of well-advised mothers eats its daily dish of oats. And a two-year-old loves flavor.



At Ten

starts the age when oats are most important. Also the age of sweetmeats and desserts.



At Forty

men realize a need for this energy food. But they want the morning dish to be dainty.



So for all these folks we made a luxury dish by flaking rich, plump oats. Quaker Oats has thus won millions to life-lasting love of oats.

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These are luscious flakes, made from queen grains only. We get but

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THE AMERICAN FOOD JOURNAL



VOLUME ELEVEN
NUMBER TWO

Chicago, February, 1916

MONTHLY \$1.00 PER YEAR
TEN CENTS PER COPY

In This Number.

- ✕ Albumen Dealt Stinging Blow. ✕
- Food and Drink in Philippines.
- Influence of Rain on Tomatoes.
- Report of Food and Drug Laws.
- New Home of Price Flavoring Extract Co.
- National Cannery Convention Program.
- Washington News Letter.
- Notes from Field of Food Control.
- Wholesale Grocery Markets.
- Gleanings from the World of Foods.
- Message from Whitmarsh.
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THE AMERICAN FOOD JOURNAL

There is no higher art than that which tends toward the improvement of human food.—Beecher.

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Vol. XI.

FEBRUARY, 1916.

Number 2.

LAST DAYS OF ALBUMEN



It must be apparent to all those who attended the hearing on baking powder and its ingredients, before the Joint Committee on Definitions and Standards, at the Bureau of Chemistry, in Washington, D. C., January 14 and 15, that the knell has sounded for White-of-Egg as a baking powder ingredient.

The overwhelming consensus of opinion at the conclusion of the hearing was that Albumen had entered in upon its last era of baneful activity, that its days were numbered and its final appearance as an agent for fraudulent trade tactics a matter of time only.

It developed at this hearing that 90% of the baking powder trade of the country is unalterably opposed to the use of albumen in baking powder. This trade opposition, combined with the opposition of 100% of the food officials, will convince any thinking manufacturer that albumen is doomed.

The sponsors of White-of-Egg were given every opportunity by the Committee to defend the use of the product in their baking powders. They were treated with the same deference and courtesy as were extended to all other members of the trade.

But they failed utterly, hopelessly, pitifully, to justify their misuse of albumen or to establish a single point which could in any slightest degree purge them of fraud and misrepresentation in their connection with the odious water-glass test.

The most ardent supporters of White-of-Egg must confess, in their own hearts, to the pathetic showing made by the albumen forces.

It is to be deplored that they did not have at least some one meagre claim to advance in favor of a custom which has long since been declared by about 90 per cent of baking powder manufacturers to be false, misleading and fraudulent.

Collapse, total, abject collapse, marked the blowing up of the defense of albumen.

It was a sorry spectacle and one which cannot soon be forgotten—the little White-of-Egg coterie clutching at straws, stabbing desperately at air, then, with all the placid calm of despair, sinking dumbly to the defeat which they knew must be theirs.

There is little more to say.

A brilliant chapter has been written in the history of a long fought struggle against a crying trade evil, which has for too long deceived dealer and consumer alike.

It is the beginning of the end and to those who have eyes and will see the end is now in sight.

ENTER JEYKLL AND HYDE.

THE following appeal to creamery patrons appeared in the January 28 issue of Hoard's Dairyman and will no doubt prove of interest to readers of this publication:

"The one thought constantly in mind with the National Creamery Buttermakers' Association is protecting the dairyman against unjust dairy standards, against adverse dairy legislation, and against excessive and unequal transportation charges. The creamery patron realizes that these three factors, if properly adjusted, are the essential factors that insure the highest state of prosperity to the dairy industry.

"About a year ago, President J. J. Farrell and Secretary-Treasurer Martin H. Meyer, at a Dairy Standard Hearing in New York, protested against adopting a too high butterfat standard; 82½ per cent fat is too high and must not be allowed to become a federal law.

"In the year 1909, when carlot shippers of butter asked for a wider difference in transportation rates, and also when they asked for a difference in rates from Chicago to New York and other eastern cities, our association, through the support of the buttermakers and their own money, fought this battle and won. This one act alone has saved the dairymen throughout the last seven years about \$6,000,000.

"Our members voted \$500 out of their general fund to carry on the rate fight and won it. For this financial support, they deserve hearty thanks.

"When your buttermaker is willing to spend for your benefit one dollar, may we not ask that each patron give 10c once each year for the fund to be used to fight for your interests?

"The railroads now charge as high as 10c for icing per 100 lbs. on dairy freight from Chicago to eastern cities. This icing charge is in addition to the 5 per cent raise recently granted by the Interstate Commerce Commission.

"The carriers have increased their earnings during the last four years 72 per cent, or about \$47.00 per minimum carload. In spite of this great increase in earnings and the tremendous increase in volume of dairy products handled, they now ask that you pay extra for refrigerator car service. You have already paid for this service when you paid the rate. To ask double pay for the same service seems to be unlawful and unjust.

"We are now fighting this icing charge and have filed our first and second brief of the hearing held at Chicago. This case will close with an oral argument on January 12, 1916, with the hope that the Interstate Commerce Commission will decide the case in our favor.

"There will be more transportation trouble soon, and as you wish us to help you in maintaining the lowest possible transportation rates for your butter, also poultry and eggs, we ask you to assist us financially now.

"When a creamery sends us from each patron 10c once each year, or any one year, it becomes a member and in return we will mail such member a copy of our annual report in which will be found a statement of how the money was spent. Each patron should be glad to pay 10 cents annually for the protection of his dairy, for the continued pros-

perity of his dairy farm, and for the financial success of his creamery.

"During the last year 150 creameries have assisted financially by contributing \$3 to \$7. Let us have 10c from each patron from your creamery. Then become a member and show us that you are men of steel, able to blaze the way to success.

"Address all remittances to: National Creamery Buttermakers' Association, 888—44th Street, Milwaukee, Wisconsin.

"J. J. FARRELL, President.

"MARTIN H. MEYER, Sec'y-Treas."

Another item which was published recently in the Delano (Minn.) Eagle is reprinted herewith:

"Minnesota creameries are expected to resist a ruling of the federal internal revenue service that butter containing more than 16 per cent moisture shall be deemed adulterated and creameries shipping butter containing moisture in excess of this limit must take out federal licenses. The test is expected to be made on the seizure of four tubs of butter from the Bellingham creamery by E. J. Lynch, internal revenue collector, who imposed penalties aggregating \$868. The creamery men declare that the revenue service had no authority to fix the standard of butter, that its act is arbitrary and that it will not be upheld by the courts. John J. Farrell, State Dairy and Food Commissioner, who is also president of the National Creamery Buttermakers' Association, will lend the creamerymen all the aid possible, as he regards the action of Mr. Lynch as unjustifiable."

None of us are perfect—no, not one—but when a man steps forth and takes an oath of public office and swears to support and enforce the law of the land, and when that office is an administrative one and it becomes his duty to punish the violator of the law, it is to be expected that he will do so impartially, pursuing the culprit wherever found, and without favor—when then our attention is brought to case after case where this pursuit of violators is not only done with great vigor, but with much expression of publicity, if not braggadocia on the part of the officer himself, we may be excused if we, that is, the taxpayers—the public—become aroused when this sworn protector of the public health and the public pocket-book is found to be protecting a certain line of manufacturers in certain flagrant violations.

We do not need to mention names, but we merely call your attention to the rank violations of the law and the criminal disregard of the public health pointed out in our issues of the past three months in the matter of butter and its manufacture.

What are the sworn officers doing to correct these wrongs?

What are they doing to protect the young and innocent—to protect the poor and the uninitiated in the purchase of their daily supply? It is enough out of line when these gentlemen fail through their negative acts, but when they by positive action use the power of the state to protect the wrongdoer, then indeed are we as a nation in a pitiful condition.

We have heard much of federal and state coöperation and it is a wonderfully good work, but what of the state officer who uses the time and money of the state to protect the creameryman who is prosecuted by the federal government for incorporating extra moisture into his product—and yet, the dairy press men-

tions one as their protector and defender. What of the state officer who also defends and endorses the crime of making the creamery product sell for a greater price and to look better than it really is by artificial color (not marked on the container)?

What of the state officer who over his own signature admits that he has fought and will fight against a law for a butterfat standard, but who would no doubt gladly accept a high standard on all other food products, who knows of the manufacturing of rotten cream into butter and winks at it, who knows of the disease-laden cream used daily throughout his state, and raises not a hand?

There are these two-sided gentlemen in our midst—as food commissioner, a pursuer of wrong—as dairy commissioner, a defender of wrong. There are also laws to impeach and remove them from office, or compel them to do their duty. How long will they be allowed to continue in their double life? How long?

LETTER FROM A READER.

The following communication has been received at this office and is given here in full for the information of our readers:

10411 Longwood Drive, Chicago, Ill.

January 28, 1915.

The American Food Journal—Gentlemen: Recent publicity regarding bad butter and bad butter making methods has aroused sharp resentment from dairy interests in place of inspiring strong efforts on their part for correction of the abuses existing in their business.

The fact of the matter is that the butter industry of the United States is working along the wrong lines and has the wrong viewpoint. It is the only business in this country in which quality is not used as the basis for extending trade. The reason for this is that only about 10 per cent of the butter produced in the United States is fancy quality; hence, big butter dealers entering a new market do not try to introduce a fancy quality, but they first find out what quality that market is used to and then match that. This policy is necessary on account of the unhealthy competition which has developed among creameries, which causes them to accept bad cream and then attempt with it to produce good quality butter. The result is that the general quality of the butter produced in this country has been lowered and the butter industry has tried to build up its trade by educating the trade to accept lower quality product.

The American butter industry, in place of trying to correct their own imperfections, have laid all their ills to the oleomargarine industry and have given generously of their time, money and energy to regulating oleomargarine in place of improving butter.

The facts in the case are that there is ample room in the United States for both the butterine and butter industries, as is shown by the following facts.

The U. S. Government census of production of farm and creamery butter taken in 1909 showed the following figures:

Farm production	996,001,000 lbs.
Creamery production	624,764,000 lbs.

1,620,765,000 lbs.

As practically none of it was exported, it meant the total per capita consumption of butter for the year

only showed about 18 lbs. U. S. Internal Revenue reports show that the total per capita consumption of oleomargarine is about 1½ lbs., making a total per capita consumption of 19½ lbs. butter and its substitutes.

The Bureau of Foreign and Domestic Commerce in their Bulletin No. 89 shows that in the United Kingdom there is a per capita consumption of oleomargarine of 8½ lbs.; butter, 17 lbs.; or total of 25½ lbs. butter and its substitutes.

In Denmark the per capita consumption of oleomargarine in 1912 was 32.6 lbs. per capita.

In Norway the per capita consumption of oleomargarine was 33.5 per capita.

These figures would indicate that the consumption of butter and its substitutes in America is very much lower than in any of the European countries and it would seem to us that there is a vast field ahead of the butter industry for *constructive* work. Improvement in *quality* and *wholesomeness* will undoubtedly result in a more liberal consumption of butter, more than enough to take care of any possible increase in oleomargarine business, even if it is permitted to be manufactured and sold without any restrictions other than are necessary to insure its sale on its own merits.

Yours truly,

E. R. GOBLE.

GOOD HEALTH RULES.

Epidemic colds, influenza, and the grip, together with the prevalence of sneezes, coughs, and running noses caused Dr. John Dill Robertson, health commissioner of Chicago, to issue a "Do and don't" list recently.

Sleep with windows open. Walk part way home or to business.

Breathe deeply through nose.

If you are subject to tonsillitis, have these glands removed without delay.

Stimulate circulation in your skin by tepid or cold sponges, night and morning.

Dress with light underclothing; wear or carry heavy wraps for outside.

Have street cars and office or shop well ventilated.

Don't kiss those with active colds.

When you have cleaned your teeth, gargle and rinse your mouth and throat.

If attacked with influenza, better stay in bed for a day or two, and call a doctor, for these colds tend to run into pneumonia.

Don't take patent medicines and irresponsible dope.

TEA AND TEA.

A contemporary says: "Interesting light on the wholesale cost of tea fifty years ago as compared with today is drawn from a letter to John O'Donahue's Sons of New York from an old customer. A receipted bill for tea, dated August 15, 1866, was enclosed with the letter. It called for twenty boxes of Oolong tea, weighing thirteen pounds each, and the price was \$1.30 per pound, the total transaction amounting to \$338.75. The present wholesale price of Oolong tea is about 30 cents per pound, a substantial reduction from the price of fifty years ago."

The commentator slights the fact that, if so inclined, he may today purchase Oolong at from thirty cents to five dollars per pound.

Albumen Is Dealt Stinging Blow. Pathetic Scene Marks Ante-Climax of Famous Old White-of-Egg Classic. Actors Struggle Valiantly Against Defeat, But Tear-Stained Comedy Collapses Utterly. Rout of the Egg Brigade a Sad and Touching Finale.

ON Friday and Saturday, January 14 and 15, a hearing on baking powder and its ingredients was held at Washington, D. C., before the Joint Committee on Definitions and Standards. The meeting was called to order at 9:30 a. m. Friday, by Dr. Carl L. Alsberg, chairman of the Joint Committee and Chief of the Bureau of Chemistry. It might be pointed out here that the Joint Committee represents the National Association of American Dairy, Food and Drug Officials, the Association of Agricultural Chemists and the Bureau of Chemistry of the Department of Agriculture. It was formed some two years ago because of commercial complaints which held that the state regulations differ so widely that business firms faced considerable unnecessary complication of detail and loss in marketing their products by reason of their endeavors to conform with the varying conditions in different sections of the country. The avowed purpose of the committee was to make uniform standards in food products for the whole country.

After a preliminary skirmish for position on the part of attending manufacturers and their representatives, the hearing, under the active leadership of A. C. Morrison and George P. Page, appearing for the American Baking Powder Association, swung into a spirited and hard fought controversy on the subject of albumen, or white of egg as an ingredient of baking powder.

Mr. Morrison opened for the American Baking Powder Association by giving an interesting and accurate history of this organization, leading up to the ultimate determination of this body to clean house and expel from its membership all and any members who persisted in the use of albumen in the manufacture of baking powder, this ingredient having been declared deceptive and fraudulent.

Mr. Morrison said in part:

"We found that the mechanism for raising bread and the differences in prices were sustained by differences in business method. We found that the American Baking Powder Association had its origin in a difference of business method. We found the American Baking Powder Association set its face against differences in business methods which were unfair, or which discredited the association or any member thereof.

"I have said that there have been better business methods as the outgrowth of fraternity, better business methods because there is a moral awakening. There have been better business methods brought about because of the action of the association in itself.

"In the old days I believe it was considered perfectly fair to say anything about a competitor. We find in the Sherman Anti-Trust Law a protest against the business methods which might result to the detriment of the consumer. We find in Congress and in the various states, laws against unfair competition. In the present Congress a bill has been introduced which goes so far as to say that a man shall not by word of mouth make false statements about your goods—the Adamson bill, which has just been introduced. With this moral awakening and with this growing fraternity in the baking

powder association itself, a good many evils have been cleaned up. While the association has been going on, with its hands and head busy in a severe controversy which meant its very existence, it has also been carrying on within itself the constant clean-up in business methods. I remember well about ten years ago when we found talc and tremolite in the baking powder of one of our members. As secretary of the association, I was authorized to inform the member that it must come out. . . . So it has been that lots of substitutes and frauds, common evils which have crept into baking powder, have been cleaned up.

"In the strenuous competition that maintains a difference in price of an equally effective mechanism, we have come to a parting of the ways in our own association. Great vigor has been put into competitive efforts as the concerns have grown larger, and the sale of baking powder has increased, and this vigor has resulted in a re-awakening, perhaps, and an emphasis being placed upon certain business methods which were for a time quiescent or abandoned. And so the association has been obliged to awake to the necessity of again taking up the question of business methods, and, if possible, purging from its membership those who resort to those methods.

"On the 6th of December, 1915, the American Baking Powder Association took formal action on the subject of albumen in baking powder, and passed the following resolution, which I desire to file with the committee:

"RESOLUTION.

"WHEREAS, the use of albumen in baking powder serves no useful, honest, purpose, but on the contrary is used for fraud and deception, which has been denounced unanimously by food officials of the United States in convention assembled at Portland, Maine, July, 1914, and;

"WHEREAS, the use of albumen in baking powder by certain manufacturers casts odium and suspicion on the sale of all baking powder; and,

"WHEREAS, the Constitution and By-Laws of the American Baking Powder Association provide (1) that one of the objects of the said association is to discourage fraud and sophistication in the manufacture of baking powder; and (2) that if any member of the association shall wilfully adopt a course of action in conflict with the objects of the association to the detriment of the industry as a whole, said member may, after hearing, be expelled by the executive committee from the association;

"THEREFORE, BE IT RESOLVED by the executive committee of the American Baking Powder Association that no baking powder manufacturer who adds albumen to his baking powder is entitled to membership in the American Baking Powder Association, and the secretary of the association is hereby directed to notify any baking powder manufacturer who adds albumen to his baking powder and who is now a member of this association, that, unless such member shall within ten days from December 6, 1915, notify the secretary of the association of an intention to discontinue at

once the use of albumen in his baking powder, a hearing will be afforded such member by the executive committee on December 16, 1915, at two o'clock p. m., at the office of the association in the city of Chicago, at which time and place such member or members will be afforded an opportunity to submit reasons why said member or members shall not be expelled from the association in accordance with the provisions of the Constitution and By-Laws. A copy of these resolutions shall be sent to all members of the association.

"I hereby certify that the foregoing is a correct copy of a resolution adopted by the executive committee of the American Baking Powder Association on the 6th day of December, 1915.

" M. M. BYRNE,
" 'Secretary.'

"The following is a resolution dated December 16, 1915:

" 'RESOLUTION.

" 'One of the objects of the American Baking Powder Association, as expressed in its Constitution and By-Laws, is to discourage fraud in the manufacture and sale of baking powders. The use of albumen in baking powder is a fraud, as it serves no legitimate purpose. Manufacturers who use albumen have done so either to injure the sale of competitive powders by the fraudulent water glass test, or to protect their own product from attack by the same fraudulent test. In either event the use of albumen serves to deceive the dealer and consumer, and to injure reputable brands of baking powder which contain no albumen. Therefore, it is decided by the executive committee, after careful consideration of the entire matter, that those members of the association who place albumen in their baking powders shall be and they are hereby expelled from the American Baking Powder Association and are declared ineligible to re-enter the association until such time as they shall make themselves eligible for membership by discontinuing fraud in the conduct of their business.

"I hereby certify that the foregoing is a correct copy of a resolution adopted by the executive committee of the American Baking Powder Association, December 16, 1915.

" M. M. BYRNE,
" 'Secretary.'

"It now becomes important to inform this committee as to the effect of that resolution.

"The association lost three members; it retained forty. These forty members probably represent, I think it is fair to say, 70 to 90 per cent, perhaps 90 per cent, of the baking powders containing salts of aluminum. . . .

"It can therefore, I think, very fairly be said that the overwhelming opinion of the reputable manufacturers using the salts of aluminum is that the use of albumen leads to fraud and sophistication, and is contrary to the fundamental principles on which the association was founded. . . .

"Before this intelligent committee, the members of which are thoroughly familiar with the whole subject, I do not think I need go into detail further than to say that, in the opinion of members of the American Baking Powder Association, representing a very large majority in actual numbers, and a very large percentage in actual tonnage, there is a firm and abiding conviction that the sole use of this albumen, or any other substance, is for an unfair test, an unfair comparative test, and it is the conviction of this whole body of gentlemen, whose reputation, I have tried to point out to you, has been consistent and harmonious in good principles in business and which is in harmony with the moral awakening, that unfair competition in business should be stopped, that this body comes to you and points out what it believes to be one of the evils in the baking powder business, and asks that in the adoption of a standard this committee take proper action to put its foot down upon this species of business competition. This committee has the power to express its opinion, and its opinion is going to carry enormous weight."

The opening broadside from Mr. Morrison's guns went far to determine the actual nature or character of the hearing and for the remainder of the first day the sessions were given almost entirely to the consideration of albumen as a baking

powder ingredient. Mr. Morrison was followed by George T. Page who now proceeded to present testimony before the committee on the subject of albumen in baking powder and the methods employed by the manufacturers of this product in placing it before the public. Before calling Dr. J. R. Chittick, Chief Chemist of the Jaques Manufacturing Co., of Chicago, Mr. Page, addressing the committee, said: "The evidence which we are about to present is upon the question of the influence of albumen in baking powder, and also upon the practice in the business of making comparative tests by those who use albumen."

In reply to a question from Mr. Page as to whether the doctor had made any experiments for the purpose of determining the effects of albumen in baking powders, the witness said:

"Yes, sir; I have. The question was put to me in this way: Does the addition of albumen to baking powder have any beneficial effect on baking? That is, can you notice any effect on the finished biscuit between that which has albumen and that which has not? To undertake this work I made an outline which I will give you in brief.

"In this outline I selected four types of baking powder. One was the cream of tartar type; one the phosphate type; one called the straight alum type; and another the combination or alum-phosphate type; all of which originally did not contain albumen. They were purchased in the open market. If these baking powder samples came in five-pound cans, I got ten pounds, and they were intimately mixed so that one baking powder would be the same all the way through. To a portion of one of these baking powders, say 1,000 grams, I added 15/100 per cent of dry egg albumen—that is the percentage stated on the label of some of the albumenized powders—and 85/100 per cent of dry corn starch. To another I added 3/10 albumen and 7/10 corn starch; to another 5/10 of albumen and 5/10 corn starch; and to another one per cent of albumen; and then to the balance of baking powder there was one per cent of dry corn starch added. The object was to have a reduction of one per cent on every baking powder so they would be brought down to the same gas strength in the end.

"Then the experiments were to be conducted on hard wheat and on soft wheat. They were to be conducted at what we call high temperatures and low temperatures. They were to be conducted on immediate baking, that is, as fast as you can get them into the pan. They were to be conducted on long standing, say 20 minutes standing. In each baking there was to be a duplicate run. For instance, we were to have one powder without albumen and the other with albumen. They were to go into the oven side by side. There were to be 256 bakings on hard wheat and 256 bakings on soft wheat."

Dr. Frear: Did you study the temperatures of the different parts of the oven?

Dr. Chittick: Yes, sir; we did. We have an oven about that long (indicating). It is all open throughout. Down each side in the center, between the pans, there was a mercurial thermometer. The temperature on both thermometers was recorded before the oven door was opened. The oven doors were opened with one person at one door and one at the other, and the two doors closed together. Then we undertook to find out how low those thermometers would drop. The lowest temperature recorded is on the charts. We baked say for fourteen minutes with a high temperature and for thirty or thirty-five minutes with a lower temperature, and the time of baking has been recorded.

The conditions carried out were as nearly identical in both cases as was, I believe, possible for human hands to conduct. In all, it meant for the hard and soft wheat 512 bakings.

Then, the weighings were taken of the wet biscuits. The weighings were taken of the baked biscuits, the loss in moisture was determined, and the volume determined. In my case I also determined the volume by coating with paraffine, weighing it and determining the displacement with water. I used two methods.

I have made a sort of a graph, illustrating the number of times albumen would show an advantage and the number of times when the non-albumenized product would show an ad-

vantage. Then I have shown the averages of specific volumes with each type of baking powder under different conditions and the final averages. It is just what I would call a neck and neck race. There is absolutely no difference between them.

Dr. Phelps: Did you make any other test than that of volume?

Dr. Chittick: The moisture determination and volume and noticing the character of the biscuits; that is all.

Dr. Frear: When you speak of character you mean the texture?

Dr. Chittick: Yes; the texture of the biscuits and the appearance of the biscuits; as to whether or not there is any difference in volume to the eye.

L. A. Fitz, in charge of the Department of Milling Industry of the Kansas State Agricultural College, said, in answer to a question from Mr. Page:

"I followed the same general outline which Dr. Chittick has outlined to you, the outline being worked out by him and brought out to me, and I looked over the matter with the privilege of making any changes that seemed necessary. I followed practically the same methods, carried the work out in the same way, and I made the reports in the same way. . . . I have compared the biscuits baked from baking powder without any albumen present and the baked biscuits made from baking powder containing albumen, and I have been unable to find any improvement that can be in any way attributed to albumen."

C. H. Bailey, of the Agricultural Experiment Station of the University of Minnesota, said that he had conducted similar experiments to those of Dr. Chittick and Mr. Fitz.

Asked by Mr. Page for his conclusions from these experiments, Mr. Bailey said:

"Basing our comparisons on the quantity of albumen employed, we found that even as much as 1 per cent of albumen in the mixture did not effect a decided improvement."

And again he said: "In general the differences were, in my opinion, wholly insignificant."

Dr. William W. Kennedy, representing Griggs, Cooper & Co. of St. Paul, Minnesota, appearing before the committee, said among other things:

"With regard to the matter of albumen, we are opposed to the use of albumen as being primarily non-essential. We feel that a baking powder will do its work better without it, or will do equally as well without it. . . . We are glad to be rid of it."

Hugh E. Layton, president of the Layton Pure Food Co., of E. St. Louis, Ill., told the committee:

"Our experience with albumen was about twenty years ago, before I became an active member of the firm. We later abandoned it, for what reason I am not prepared to say. We have lost considerable business as the result of the so-called cold water test. The cold water test appears to be to the housekeeper, at least, an unanswerable argument in favor of the brand containing albumen."

E. C. Rittenhouse, president of the Hunts Perfect Baking Powder Company, of Minneapolis, Minnesota, spoke pointedly of the unfairness and injustice suffered by the manufacturer who has to contend with the cold water test, and informed the committee that these unscrupulous tactics are being carried on in his territory at the present time.

Charles Rogers, president of the J. C. Grant Chemical Company, of East St. Louis, said that he had discontinued the use of albumen in his baking powder very recently. When asked by Mr. Page why his company had taken this action, he said:

"Well, because we never believed in it. We did not think it was right and thought we ought to quit it."

Mr. Page: With reference to the recent water glass tests that you have come in contact with, will you tell us whether that happened in new territory to concerns representing albuminized powder?

Mr. Rogers: Some new and some old. Michigan is old territory.

Mr. Page: Old to them?

Mr. Rogers: Old to them and old to us.

Mr. Page: It was used only for the purpose of a comparative test?

Mr. Rogers: We have never seen it used for anything else. The albumen people claim that they use it for something else, but I want to tell you gentlemen that it never has been used for anything else.

Mr. Page: How long ago was it that you heard them claim that, the earliest time that you ever heard them claim that?

Mr. Rogers: Inside of two years.

Dr. Frear: I do not believe that that question is quite clear. What does he mean by that? I do not know whether your question applies to the use of the water glass or to the use of albumen for some other purpose than the water glass test.

Mr. Page: I mean the claim that albumen was put into baking powder for some other purpose than a comparative test by the water glass.

Mr. Rogers: I know that the claim has been made that it was used to determine the age and quality of the baking powder. As far as I know that is absolutely—and we have had every one of our men looking for some instance of that—it is absolutely bunk. (Laughter.)

John J. Boink, secretary of the Grocers' Chemical Works, of Evansville, Indiana, followed Mr. Rogers before the committee and said that he had never known the water glass test to be used for any other purpose than that of a purely comparative test. This abuse, the witness said, was at the present time very prevalent in Evansville.

W. H. Syne, solicitor for the Sea Gull Specialty Company, of Baltimore, said to the committee: "We do not believe that albumen serves any good purpose in baking powder."

R. C. Plume was now called. He said: "I represent the R. B. Davis Company, of Hoboken, New Jersey. We are an independent concern. We are not a member of the American Baking Powder Association and we have never used albumen."

Dr. Frear: What kind do you make?

Mr. Plume: We make a straight phosphate baking powder, a combination powder. It is so-called alum and phosphate. We have never participated in what appears to be a trade controversy in this albumen matter. We do not think albumen is a necessary component of a baking powder, and we will be very glad to see a standard formula adopted without albumen in it. We believe that would do away with what we consider unfair competition.

At this point Attorney Page called C. J. Deprend.

Mr. Page: Mr. Deprend, will you give your name, your residence, and your business?

Mr. Deprend: C. J. Deprend. I am editor of the American Food Journal, of Chicago, Illinois.

Mr. Page: I will ask you to state if you have come in contact anywhere with this so-called water glass test, and will ask you to say how recently you have come in contact with it, if you did so, and what your experience was.

Mr. Deprend: Yes. I came in contact with the cold water glass test last Tuesday. I saw the salesman take out his product, and also the product of another concern, both being in cans. He proceeded immediately to a test.

He took a spoon full, a similar quantity of both powders, and put them in different glasses and mixed them with water. The albumenized powder rose immediately to the top of the glass and the competitive powder did not rise.

The salesman called the prospective customer's attention to this fact and went on to say that the reason that the albumenized powder rose to the top was because there was albumen in it, and the fact that it rose demonstrated the superior raising power of the albumenized powder, and in a relative sense, the inferior quality of the competitive powder. He then knocked the glass on the counter. He knocked it pretty hard, and he did that to show that there would be no collapse. He also reversed it for the same purpose, and there was no collapse, of course. He went on to say then that the result would be the same when the housewife would slam the oven door. He also made the claim that because of the albumen in the albumenized powder only half of the

amount necessary in any other powder would be necessary in the albumenized powder for the same baking.

Dr. Frear: You, of course, did not know what the real composition of the two powders was?

Mr. Deprend: No, sir. I heard him describe his own as albumenized powder, dry white of egg powder, and the other as an albumen free powder.

Dr. Phelps: Did he represent himself to be an official of the company represented or merely an employe?

Mr. Deprend: An employe. He carried the regular grip, tumblers, the regular salesman's outfit.

Dr. Phelps: You assumed that he was connected with some company?

Mr. Deprend: I know he was connected with some company.

Dr. Phelps: You can certify to that fact?

Mr. Deprend: Yes. Unless the man was merely working for pleasure the assumption would be that he was an employe of a firm. He gave the firm's name, and he had an appointment with this party.

Mr. Page: Tell the committee when this happened.

Mr. Deprend: On Tuesday of this week, the 11th.

A number of letters were now read before the committee and entered into the record. These letters were from dealers in various parts of the country, stating that the fraudulent cold water test is still in active operation.

A weak-kneed, vacillating, groping and utterly hopeless defense was now undertaken by the albumen forces.

The staggering blows from their opponents had crumpled their confidence and knocked their house of cards upon the floor.

It reminded one of the heroine in the melodrama when she cries out, "Please, kind sir, have you no pity?"

Attorney Smith of Washington, D. C., a brilliant and genial member of the bar, struggled grimly to stem the merciless tide for his client, White-of-Egg. But too much had been accomplished. The American Baking Powder Association had rested its case upon an expose of what all fair minds must concede to be an unmasking of a brazen fraud. The general sentiment was that albumen had received the black eye of its career.

Mr. Smith began with a general denial of the assertions made by the opponents of albumenized baking powder. His first witness was K. K. Bell, sales manager for the Calumet Baking Powder Company of Chicago. Mr. Bell gave a very pleasing rehearsal of the famous water glass act, in an attempt to show the many good qualities of albumen. Mr. Bell distributed little books among the assemblage and spoke entertainingly on the subject of "harnessing" gas.

"Harnessing gas" held the floor now for some considerable time.

C. A. Spencer, of Akron, Ohio, now addressed the committee and spoke long and eloquently on the many good qualities of albumen as a "harness."

Mr. Spencer was finally followed by Dr. T. J. Bryan, chief chemist of the Calumet Baking Powder Company. Dr. Bryan upheld in a general way the cause of albumen in baking powder, but no new or significant points were brought out through his testimony.

An adjournment was taken at 5:30 p. m. until the following day, Saturday, January 15, at 10 a. m., when the hearing was resumed and other matters were taken up by the committee. The question of lead in baking powder was the first to be considered.

Among the firms interested in the trade, there was a difference of opinion as to how high the standard of purity should be set. Charles J. Young, secretary of the Provident Chemical Works, of St. Louis, Mo., supplying phosphates for baking powder and raising flour, declared that further reduction in the limits on lead, set at twenty parts in a million, and arsenic, set at 1.43 parts in 700,000, would work injury to business by calling for unnecessary expense. He said that he would have the limits set on the completed powder, and not on the raw material, since to set the limit on the element

containing questionable ingredients would still further reduce the percentage permissible in the powder. Little is known, he said, of fluorides and their effect on health.

Walter B. Brown, of the Victor Chemical Works, in Chicago, on the other hand said that his firm would be willing to see the limits set materially lower—perhaps one-half as high for lead and at one part in 5,000,000 for arsenic. He also said that it is possible to extract almost 100 per cent of fluorine from the phosphates. He said he would also allow no lime phosphate in the phosphates, as a substance not necessary for good baking action, and possibly injurious to health. He declared it was usually added by the manufacturer to the higher priced phosphate.

Mr. Young defended the use of lime sulphate, saying that the buyers demand it, because of an improvement in the baking action, and that to exclude it would increase the cost of self-raising flour used generally in the south. He contended that no menace to health was involved, and that no standard should be set.

Dr. Edward Kressel, of New York, representing the Wilkes Martin Wilkes Company, supplying acid phosphate of calcium to the trade, declared that the experience of his firm showed that sulphated goods do not keep as well as those free from sulphate.

Dr. Bernard P. Hesse, representing the General Chemical Works, with headquarters in New Jersey, speaking on the supplying of alum materials, said that his firm could meet the present limits of tolerance, but that if these were reduced, the conditions of manufacture would change, and he could not say what cost would be added. The presence of lead and arsenic, he said, is bound up in the methods of manufacture, and involves no blame on any baking powder merchant. Reduction to the present standard has added to the cost, and the question of setting a still better standard is simply one of how far it is advisable to go in increasing expense.

Mr. Brown, taking up again the question of sulphates, said that while a pure phosphate might call for a slight increase in cost, to use a sulphate means so much more unnecessary and perhaps harmful mineral substance in food.

Mr. Young, resuming the other side, denied that sulphate is added by the manufacturers, and said that it is developed in making the compound demanded by them, and that it can be reduced according to the wants of the customer. To set a pure phosphate standard, he said, would increase the cost \$300 a car, and this would mean an item of \$15,000 a year to many manufacturers in the south.

The hearings closed with the question developed to this point, the companies filing their reports and offering their co-operation to the committee in its deliberations in arriving at right standards. Individual members of the committee varied in opinion on the question of lead, arsenic, and fluorides in baking powders. Some considered the amounts so small as to be negligible, and others felt that for any substance which might be harmful, the limit of tolerance should be reduced as rapidly as improved methods of manufacture make it possible. They agreed in thinking that the presence of these substances in small amounts implies no culpability on the part of manufacturers, but is inevitable at the present stage of manufacture.

The hearing was easily the most representative ever held and was attended not only by representatives of the largest baking powder manufacturers, but also by those of the large chemical manufacturers of the country.

Among the companies represented were: The General Chemical Co., New York; the Provident Chemical Works, of St. Louis; the Victor Chemical Works, of Chicago; the Royal Baking Powder Co.; the Rumford Baking Powder Co.; R. B. Davis Baking Powder Co.; the Grant Baking Powder Co.; the Sea Gull Specialty Co., Baltimore; Jaques Manufacturing Co., Chicago; Hunts Perfect Baking Powder Co., Minneapolis; Griggs, Cooper & Co., wholesale grocers, Minneapolis; B. Heller & Co., Chicago; Calumet Baking Powder Co., Chicago; Crescent Baking Powder Co.

SULPHATE OF LIME.

By GEORGE LLOYD.

One of the subjects discussed at the hearing before the Joint Committee on Definitions and Standards at Washington, on January 15th, which is of particular interest to the user of phosphate, was the question of sulphate of lime in phosphate.

An argument was made by one speaker in favor of sulphate of lime for self-rising flour. It was brought out at the hearing by others that the total neutralizing strength of sulphate of lime was only 20 per cent in units of bicarbonate of soda and that its presence in phosphate did not add to the leavening efficiency, and when present in considerable quantity, it produced a bitter taste, due to the sulphate of soda formed in the reaction between sulphate of lime and bicarbonate of soda.

It was admitted by the advocate of sulphate of lime that a phosphate containing this ingredient was not now used in baking powder, but he claimed that it was a distinct advantage in self-rising flour.

Having done considerable experimental work to determine the value of sulphate of lime as a leavening acid in past years, I believe that my conclusion on the subject may be of some interest. My experience has been that what little neutralizing value is obtained from calcium sulphate is developed only after considerable heat has been applied, and it is fair to assume that the amount of gas which is released from bicarbonate of soda by sulphate of lime is released at a point when the biscuit has been crusted over and the texture has become firm, at which point the release of the gas is not any more of leavening value.

I disagree, therefore, with the view that the presence of sulphate of lime in phosphate improves the baking qualities of the phosphate, but quite the contrary, I believe it impairs them.

Furthermore, in my opinion calcium sulphate introduces into food an excessive amount of unnecessary mineral matter without a compensating advantage of leavening efficiency.

Years ago phosphate containing sulphate of lime was used extensively for baking powder, but as labeling laws were enacted in different states, the use of sulphate of lime was discontinued, because no baking powder manufacturer wanted to show on his label that his product contained sulphate of lime (gypsum). To recommend at this late date that a phosphate containing sulphate of lime has superior advantages for the manufacture of self-rising flour seems to me a mistake. Some states now require that self-rising flour show the acid ingredient on the label, and there is little doubt but that eventually all self-rising flour will have to be labeled with the acid salts it contains. If a phosphate is used, therefore, which contains sulphate of lime, then this sulphate of lime (or gypsum) would have to show on the self-rising flour label. I do not believe that the consumer would care to use any food product so labeled, and if he was not posted in the matter, competing interests would soon enlighten him.

To recommend, therefore, to the manufacturer of self-rising flour that he deliberately introduce sulphate of lime into his product in connection with his phosphate, seems to me to be entirely wrong, and such practice would surely work injury to the industry in the long run.

KEEPING QUALITIES OF CORN MEAL.

Investigations on the keeping qualities of corn meal show that stone-ground meal, which on account of its rich, oily flavor is so desired in the palatable muffin, hoe-cake and pone, spoils much more quickly than meal made in the modern mill by the roller process. For this reason the stone-ground meal should be eaten as soon as possible after milling. In this respect it is like milk and cream which are usually consumed within a few hours after being produced, and which under the most favorable conditions can be kept in their natural state for only a short time. The roller mill meal is, in its keeping qualities, more like butter which can

with proper care be kept in good condition, not indefinitely, but for a reasonable length of time.

In those sections of the country where it is customary to take corn to the mill and carry back the meal, frequent trips should be made to the mill and only small quantities of corn taken at each trip so that the meal can be used up in a short time after being milled.

The palatable, characteristic taste of the stone-ground meal is largely due to the oil contained in the germ of the corn. As the whole kernel of corn is ground in the stone or French-burr mill this oil is pressed out in the process and imparts its flavor to the meal. In the roller mill process the germ is taken from the corn before rolling by a machine called a degerminator, and but little of the oil gets into the meal. The germ, if allowed to remain in the meal, causes it to spoil quickly. So the very thing that imparts the desirable flavor to the meal will also injure its keeping qualities. In some cases in stone-ground meal the germ is removed by bolting after grinding. This improves the keeping quality over that of unbolted meal, but does not make it equal in keeping qualities to the meal made by extracting the germ before milling.

The term "water-ground" meal applies to the product ground by stones without regard to whether the motive power is water, steam or electricity. At one time nearly all stone grinding mills were operated by water power while roller mills were usually operated by steam, and so the term "water-ground" was used to mean the same as "stone-ground." In later years, however, steam and electricity have almost entirely displaced water as a motive power in mills. It is the milling machinery, and not the source of power, that determines the character of the meal that may be produced.

The keeping quality of corn meal is also greatly affected by heat and moisture. Other things being equal, the drier the meal the longer it will keep. It is the custom in larger mills and in some smaller ones to artificially dry the meal after milling. In wet sections of the country, or in wet weather anywhere, dried meal will very quickly absorb moisture from the atmosphere. Any kind of corn meal will keep much longer in cold weather than in warm weather. It should, therefore, be stored in a dry, cool place.

GRAPEFRUIT JUICE.

A simple method of bottling the juice of grapefruit for use in making acid beverages is advocated by the United States Department of Agriculture as a means of gaining a useful by-product from hundreds of thousands of cases of grapefruit which now are wasted. An investigation was undertaken at the urgent request of Florida grapefruit growers, who reported that the market during the season would not take up a large proportion of the grapefruit crop, and asked the department to determine the possibility of utilizing the fruit or its juice in some profitable way.

All that is necessary, according to the government's fruit-juice specialists, is to bring the grapefruit juice to the boiling point in a porcelain-lined or enameled kettle, pour it while still hot into bottles, which then are hermetically sealed. The juice when so handled will keep indefinitely, and provides a base for grapefruit-ade or other acid beverages having the characteristic acid, somewhat bitter, flavor of the fruit. Experiments show, however, that it is highly important that the bottle be completely filled, so that no layer of air be left between the top of the juice and the cork or seal. Where air in any amount comes in contact with the top of the sterilized juice it will cause the juice to change its color. In handling the juice it is particularly important that it be kept from coming into contact with iron or other metals easily acted upon by acids.

The investigators found also that it was possible to freeze the grapefruit juice into solid ice and then by whirling the ice in a centrifugal machine to take out a large part of the water and leave the solids and flavoring matter of the fruit. This freezing and concentrating of the juice greatly reduces the bulk and makes a product which can be sterilized by heating and kept indefinitely. Care must be taken to keep the juice from coming in contact with iron.

Those who wish to make a clear juice may filter the grapefruit juice before it is heated by adding to it from 2 to 3 per cent (about 3 ounces avoirdupois to the gallon) of infusorial or Fuller's earth well washed with hot water.

Food and Drink in Uncle Sam's Philippine Possessions—One Homesick Yankee Will Feast on Peaches, Pie and Juicy Steaks upon Return to United States

By LUCY DOGGETT GABEL
Bureau of Science, Manila, P. I.

THE Philippine Islands (chiefly Manila City) have a variety of nationalities to feed beside the aborigines who have apparently changed little since Magellan was here about 400 years ago.

We find English, Dutch, German, Swiss, Turks, Armenians, Greeks, Chinese, Japanese, Malaysians, East Indians. These I have seen and I am told every other race and nation is resident here. The islands produce food products in profusion. Some of these the foreign peoples acquire a taste for and some in slang phrase "do not go" with them. In the native fruit line we find the omnipresent banana and the cocoanut (belonging to the nut family). The banana is of three varieties, the green banana, the yellow banana and the three-sided banana used for frying. The mango is king of the tropical fruits, and believed by superstitious folk to be partly of divine origin. At first it is repugnant to foreigners on account of its heavy odor and flavor, but all are soon in love with it and the liking remains.

The mango combines the muskmelon, peach and strawberry flavors, all under one skin. It is universally liked. The pineapple and papaia rank next as luscious fruits. The pine (pineapple) is known and universally liked by inhabitants of the temperate zone. The papaia is much like our muskmelon in exterior appearance with an added pink tinge to the rind. Beadlike seeds are numerous, the pink orange interior is delightfully refreshing and, combined with nutmeg flavor, gives a delicious ice cream. Mango ice cream alone outranks papaia ice cream. The Chino-Chinese pomela is deep pink internally and much like grapefruit.

The native pomela is lemon color inside and more fibrous. The natives attempt to force the growth of the mango by building fires under the trees and striking the bark.

There is about the same difference between the Chino pomela and the native variety, as between Hawaiian pineapple and the native pineapple; the latter is fibrous and of less fine flavor. The cocoanut is the cheapest thing in Manila (2½ cents gold). It is about the only cheap thing here, unless one resorts only to the native diet, fish, rice and bananas.

The lansone is highly esteemed by some. It is much like the catawba grape. It is eaten raw and makes a delicious salad. The Spaniards favor this fruit to the exclusion of others, I am told.

The mabola is a beautiful rose-colored fruit, very odoriferous and about the size of a large Jonathan apple. In flavor it is a cross between the pumpkin and a very sweet apple. The chico is a peculiar coarsed-grained, acid fruit with a peculiar nutty fruity flavor and makes delicious ice cream. We never see grapes, peaches, pears, cherries or berries here except in the can.

Our American apples sold by street vendors are very inferior in size and flavor, and yet the Muchachos (boys) think they have something great when they can offer the American signora "Frisco" apples. There are fruits eaten only by the natives, viz., casoy, dayep, cabel, Camias, camates, jak, baya-bas and bilimbi. The natives grow the pili nut and peanut here. The pili nut is the best nut I have ever tasted. When parched it is much softer than the almond with a much milder taste and seems to melt in the mouth. It supplants almonds here.

It is surprising to me that some artist has not painted these tropical fruits—the coloring would be beautiful.

Sometimes the natives send their fruits to market green to protect themselves from the petty thefts innumerable.

Our lemons, limes and oranges are small, green, acid fruits, far inferior to those known in the States, but we put sugar on them and use them, for they cost only 12½ cents gold a dozen, while American oranges sell for \$1 and \$1.25 a dozen. All fruits except the thick skinned ones must be scalded (and your muchacho must be watched to see that he uses boiling water. In cholera epidemics thick skin fruit is scalded, too.

It may be stated here that this Manila city life is for the rich man's purse. In the provinces of the Philippines, if one can raise one's own fruit and vegetables and fowls, living becomes much more reasonable.

To live on American products only it would require a fortune. The native vegetables, used chiefly by the natives, are bamboo sprouts, ampalays, bateo, bawang, calabozo, mongo, opo, poso, rabanos talong ubi.

Pot herbs are banana blossoms, camote cancong, mostazo. Condiments are sampalok, sili, sibug, luya and alibangbang. The vegetables which grow here and in the States are beans, cucumbers, okra, onions, radishes, peppers, egg plant. The tomatoes are very bad. They are sold half green and are about the size of an apricot and infested with insects. We see no carrots here, parsnips, turnips, asparagus, pumpkins, squash, except as dried and canned products. The corn is inferior. Lettuce cannot be eaten by the American unless scalded, and this precludes its use in salad. We have no head lettuce. Spinach is inferior and radish tops are sold for salad. The U. S. Government is now teaching the young Philipino the States' methods for farming, and it is a question of a few years, should we retain the islands, when we will find our fruits and vegetables superior and in larger variety from which to choose.

Many Americans here live only on canned goods and cold storage produce and, combined with the climate, they acquire a chalky appearance in time and are not as healthy as those who use the fresh fruits and vegetables when cholera or other deadly epidemics are not prevalent. The Islands' meat supply consists primarily of fish and crustaceae, hen and hog. The crabs and shrimps here are delicious. We have some wild ducks and some goats. Caraboa (wild buffalo) and horses are used by natives for food when they are too old for further service. The Americans confine their meat diet to salt water fish and crustaceae, chicken, ducks and beef imported on hoof from Australia and China. All meat here must be well cooked to preclude infectious diseases transmissible to man.

Our river fish are polluted with sewage. The native fish are biscow lapalap, dalag, condoli buan-buan, talilong, talakotok, palos, tigi ti, bito, bia, ayungin, tuyo and matinik, halobabai, sapsap, dilis and hipon, and potatoes from Japan. There is a large colony of Germans here, so we get all the German sausages and sauer kraut.

The natives have a combination used by themselves called "suman." It consists of sugar, rice and tapioca wrapped in banana leaves and boiled. "Poto" is made of boiled rice and sugar. "Babinkang malagkit," a glutinous variety of rice grated cocoanut and sugar cooked together. The Chinese eat "guleman" made from seaweed, "bihon" made of rice flour and mongo beans. Milk, butter and cheese have no place in the native diet, except in rare occasions wild buffalo milk

and goats' milk are used. The poorer class of Filipino is fond of locusts and locust eggs; they are mixed with herbs and allowed to ferment in a miniature silo and then they have a feast.

He also chews an herb with a red coloring matter and acquires red teeth in time.

A native can live on 75 cents gold a week by living on the cheap fishes, rice and bananas. You seldom or never see a fat Filipino, while Spaniards are frequently very heavy.

The Philippine Government sells distilled water here at 1 cent gold a liter. It is necessary to use only this kind of water on account of amoeba and flagellates and hookworm, which infest these waters.

The native has acquired a natural immunity from association, but he is healthier if he boils his drinking water.

Sanitary precaution is the foreigner's slogan here, and not observing these rules accounts for the natives' high death rate. The natives drink "bino" as their intoxicating drink. It is made by fermentation of a sage bush out here. It is considered destroying when used much in these climates. The natives are very fond of eggs "bahut" with the chick partly developed in them. Fresh eggs when bought from a street vendor (if one is lucky to get them fresh) sell for .20 gold a dozen. On the Escolta, our chief business street, they retail for 40 cents gold a dozen.

Americans and foreigners generally use American and Swiss condensed milk. Guaranteed milk sells for 11 cents a quart and the concentrated condensed milk for 9½ cents a pint, but this is to be diluted to a quart to make normal milk. Roosters which are killed in cock fights are a feast to the natives.

The cocoa bean has to be sent abroad to be prepared for food, and likewise the sugar. Of very recent months it is announced that first-class sugar will later be furnished here.

We still pay higher for sugar and cocoa than in the States. Our ice boxes and refrigerators and sewing tables must all have their legs in water and petroleum to keep out numerous

small insects, which carry disease. All our packages come hermetically sealed and we have to have screw top cans, Mason jars and glass stopper jars for all our edibles, and keep them in gauze safes to exclude flying insects. A sorry lot of Americans we would be without the big packers and canners and we would have to resort chiefly to the aborigines' diet. The American packers and canners prepare foods specially for the tropics. They receive extra special treatment to stand the intense heat and humidity.

If the consumer can afford to pay the price he has every delicacy in the way of canned, salted goods, bottled and dried goods at his disposal, but the rates are much higher than in the states. Their aroma and flavor is preserved, the only products which I have found not delicious being the canned cauliflowers, pears and the kippered herring. When I return to the states I shall regale myself with fresh peaches, apples, and apple pie and peach pie. I shall also get me some rare roast beef (as only Chicago restaurants know how to prepare) and some thick, rare juicy steak with mushrooms. All of our meats here must be well cooked to avoid the transmission of disease. I shall also have fresh milk and ice cream made from fresh cream, as we get only the canned product here. Manila's food supply is a problem, because most of the Americans and foreigners live in Manila or its environs. The natives do not have to be catered to, as they know no other diet than their primitive foods, unless they acquire the liking for American chow (food) by stealing tidbits from the Americans' kitchens, or learn the white man's cuisine in the public school curriculum. They get so little pay that they could not afford to pay for American chow, anyway.

Conditions would be deplorable were it not for the food brought to us from China, Japan, Australia, Switzerland and our own country. The Americans and other foreigners in out-of-the-way parts of the world rely to a great extent for their food supplies on the ready means of water transportation and the modern wholesome methods of preservation.

Influence of Rainfall on Composition of Tomatoes

By W. D. BIGELOW

Chemist National Canners' Association.

IT IS the experience of many canners that tomatoes are unusually "sloppy" in seasons of excessive rainfall. They find this is evident both from the amount of water that separates on the peeling table and in the can during or after processing. Many canners are under the impression that the authorities enforcing the food laws judge the presence or absence of added water by the amount of liquor in the can or by the amount of solid meat that separates on a screen. This is not the case. Added water is determined in canned tomatoes by the chemical examination of the product. Attention is given to the solids in solution, such as sugar, acid and mineral matter rather than to the drained solids. The chemist can determine the presence of water in tomato juice as readily as in the canned tomatoes.

Now, if tomatoes were found to contain more water after a heavy rain than at other times, the percentage of these soluble solids would, of course be correspondingly reduced and the chemist would be unable to determine whether water had been placed there by nature or in preparation for canning.

The laboratory of the National Canners' Association has endeavored during the last two seasons to secure data which would have a bearing on this question. The composition of tomatoes varies through rather wide limits because of the environment in which they are grown, and this complicates the study of the question. It was thought best to examine raw tomatoes as they ripened throughout the season and arrangements were made with the Bureau of Plant Industry and the Maryland Experiment Station by which the laboratory secured samples of tomatoes of known varieties grown on plants set aside by these institutions for that purpose. During the growing seasons of 1914 and 1915 tomatoes were picked as fast as they ripened (usually two or three times a

week) from the plants mentioned above and brought to the laboratory for analysis.

Even in the same variety of tomatoes grown on the same plants there was considerable variation in the composition of successive pickings, which could not be explained by variation in rainfall. Taking the data as a whole, however, there appears to be a general tendency for the soluble solids to decrease in amount as the season advances. In both 1914 and 1915 the soluble solids of the various varieties of tomatoes examined were highest when the fruit began to ripen on the plants and successive pickings contained on the average a smaller and smaller amount of tomato solids until the end of the season.

As an illustration of the data secured, there is given below in tabular form the average results obtained with Stone tomatoes for various periods of the summer.

Arlington Experiment Farm.			Maryland Experiment Station.	
Date.	Rainfall (inches).	Av. per cent solids in tomato juice.	Rainfall (inches).	Av. per cent solids in tomato juice.
Aug. 1-15	5.61	5.43	...	...
Aug. 16-31	2.60	5.11	...	...
Sept. 1-15	0.75	4.74	0.61	5.13
Sept. 16-30	0.97	4.11	1.11	4.70
Oct. 1-15	...	...	1.04	4.89
Oct. 16-27	...	...	0.86	4.59
Aug. 1-31	8.21	5.20	...	...
Sept. 1-30	1.72	4.60	1.72	4.94
Oct. 1-27	...	...	1.90	4.75

Owing to the abnormal season the tomatoes ripened at

both places later than usual. The first fruits ripened on the Arlington Farm August 6 and at the Maryland Experiment Station September 7. It happened, therefore, that the rainfall was much higher during the first month that tomatoes were secured from Arlington (August) than during the first month of Maryland tomatoes (September). In fact, the rainfall during the month of August was excessive. Notwithstanding this fact (or perhaps partially because of this fact), the difference in solids between the first and the last of the season was much greater with the Arlington tomatoes than with those grown at the Maryland Experiment Station. In both the years mentioned the rainfall was higher before the tomato season than during the season, and the ground was well saturated at the time the tomatoes began to ripen.

The decrease in solids with the advancing season mentioned above may have been due to causes quite distinct from the rainfall. The tomato plants may afford more soluble solids, such as sugar and acid, to the first fruit ripening, and less

and less as the season advances, and tomatoes ripening in September and October may contain less solids than those ripening in August because of the cooler weather.

We are not warranted, therefore, in concluding that the high rainfall and the relatively high soluble solids in the tomatoes of the first part of the season are evidence of a relation between the two. The question would have been simplified if we had had, as we hoped to have, a heavy, soaking rain preceded and followed by dry weather. From the data given above, however, it appears improbable that the "watery" condition of tomatoes observed by canners after a heavy rain is due to a greater percentage of water in the tomatoes. It appears more likely that the structure of the tomato is so changed that it does not hold its juice as readily as when grown under normal conditions. At any rate, packers need not fear that tomatoes put up during an abnormally wet season will be mistaken by chemists for watered tomatoes, notwithstanding their "watery" appearance.

Full Report of Food and Drug Laws Enacted by Congress and the Various States During Year 1915

THE following is a report of all food and drug legislation enacted by Congress and the legislatures of the several states during the year 1915. If desired, further details with respect to the laws herein mentioned will be furnished by this publication upon request.

CONGRESS.

Harrison Narcotic Law.—Public Act No. 223, known as the "Harrison Narcotic Law," regulating the sale of opium and other narcotic drugs and preparations containing them was explained in this Association's Bulletin of February 15, 1915.

Standard Barrel.—Public Act 307, establishing the standard barrel for fruits, vegetables and other dry commodities, was quoted in full in the April, 1915, issue of the Bulletin.

Bills of Lading.—Public Act 325 amends the law relating to bills of lading. For counsel's analysis of this law, see April, 1915, issue of Bulletin.

Income Tax Penalties.—Public Res. 398 authorizes refund of penalties in certain cases for failure to file income tax returns.

Exports.—Public Act 293 makes an appropriation for the investigation of chemical and physical decisions applicable to American food products in foreign countries and also for the inspection of such products before shipment when desired by American exporters.

War Revenue Act.—The War Revenue Act, which was to expire by limitation on December 31, 1915, was extended for one year to and including December 31, 1916.

ALABAMA.

Act 467 amends the Code and prohibits the coloring of soft drinks with any coal tar preparation except the certified colors approved under the national law.

Act 619 amends the law relating to the duties of the State Board of Health in the enforcement of the health laws, including sanitation in food establishments.

Act 555 amends the law regulating markets and market houses and the inspection of food products.

Act 371 prohibits the use of the United States flag, the state flag and the Confederate flag for commercial purposes.

Act 160 as amended by Act 706 provides for the regulation and licensing of merchants receiving shipments of farm produce to sell on commission, including all agricultural, horticultural, vegetable and fruit products of the soil, poultry, eggs, dairy products, nuts, honey and like articles, but not tea or coffee.

Act 590 amends the law relating to cotton seed meal.

Act 697 amends the commercial feeding stuffs law.

Act 318 prohibits fraudulent or misleading advertising.

Act 605 amends the law relating to fertilizers.

ARIZONA.

Chapter 23 regulates the labeling of containers of cold storage eggs and requires the display of placards in places where such eggs are sold.

Chapter 42 amends the bulk sales law.

CALIFORNIA.

Chapter 93 amends the law relating to the exemption from prosecution under the food laws of dealers who can establish a guaranty from the wholesaler or manufacturer. A guaranty may be either general or special.

Chapter 123 expressly recognizes the metric system and provides that no contract or pleading in any court shall be deemed invalid or liable to objection because the weights and measures expressed or referred to therein are weights or measures of the metric system.

Chapter 164 amends the law relating to the sale of dairy products, including standards for milk and cream.

Chapter 170 requires packages of seeded raisins, if labeled to indicate that the packages contain raisins, to be conspicuously labeled to also indicate the variety of the grape from which the raisins are manufactured or produced. This law takes effect September 1, 1916. See Association's circular letter of June 22, 1915, as to what extent members are affected thereby.

Chapter 659 establishes standards for the packing of the following fresh fruits: Cherries, peaches, apricots, pears, plums, prunes, grapes, berries and cantaloupe. The act contains many detailed provisions as to uniformity of size, quality and maturity and as to the stamping of containers with the name of the variety, the minimum weight of contents and other facts.

Chapter 634 amends the law prohibiting false advertising.

Chapter 713 establishes a state commission market for the sale of farm products on commission.

Chapter 712 establishes standards for the packing and shipping of apples and regulates labeling of containers. It provides exemption from prosecution for those who hold a guaranty of shipper.

Chapter 616 regulates the sale of food containing imported eggs.

Chapter 416 regulates the sale of imported butter.

Chapter 385 amends the cold storage law.

Chapter 737 amends the law relating to oleomargarine.

Chapters 528 and 529 amend the pharmacy laws, and among other things specify what drugs may be sold by grocers and general merchants.

Chapter 639 amends the Net Container Act to make it

more uniform with the National law. For details see "Digest of National and State Food Laws."

Chapter 159 regulates the sale of citrus fruit damaged by frost.

COLORADO.

Chapter 117 makes it unlawful for any person to engage in any manner in any gift enterprise business.

Chapter 67 prohibits fraudulent and misleading advertisements.

Chapter 75 makes it unlawful to sell at retail any preparation containing opium or cocoa leaves except upon the prescription of a physician. The act exempts from its provisions preparations containing certain limited quantities of such drugs and also certain preparations for external use.

Chapter 54 requires commission merchants selling farm produce on commission to pay a license fee and file a bond.

Chapter 92 is a bulk sales law.

Chapter 172 fixes standard sizes for baskets or other open containers for small fruits and berries.

CONNECTICUT.

Chapter 181 establishes standard grades for apples when assorted and packed in standard closed packages as defined in the act, and prescribes various requirements in branding standard packages.

The provisions of the general food law relating to the collection and examination of samples were amended. The law was also amended by adding the Sherley provision as to drugs.

The law relating to the sale of vinegar was also amended.

Other laws of interest relate to fertilizers, cattle feed and the sale of drugs at retail.

DELAWARE.

Chapter 52, which took effect June 1, 1915, establishes standard grades for apples grown in this state when packed in closed packages. Every closed package of such apples must be branded with certain information specified in the act, including a statement of the grade. This act does not apply to apples packed and branded in accordance with the national law.

Chapter 51 regulates the sale of seed.

FLORIDA.

A new law requires food establishments to be equipped with wire screens to keep out flies.

Laws relating to commission merchants and establishing a standard field box for oranges, grape fruit and lemons were also enacted.

The law relating to license taxes was amended and requires merchants using trading stamps to pay a license tax of \$250 for each place of business where they use such stamps.

The making of false statements in writing with a fraudulent intent to obtain credit, goods or money is prohibited.

The drug law was amended prescribing what household drugs and remedies may be sold by general merchants.

IDAHO.

Chapter 61 prohibits, under heavy penalty, any person other than a manufacturer, jobber in drugs or retail druggist to sell any cocaine, alpha or beta eucaine, opium, morphine, heroin, chloral hydrate or any of their derivatives or any compound or preparations containing such substances. Patent and proprietary remedies, paregoric, Dover's Powder, laudanum, Tully's Powder and other preparations sometimes handled by grocers will be affected by this law, which took effect May 8, 1915.

Chapter 23 prohibits false advertising.

Chapter 16 contains the uniform bills of lading law.

ILLINOIS.

The general food law was amended.

The weight or measure branding of package food is made compulsory. Reasonable variations are permitted. Tolerances and also exemptions as to small packages are to be made by the State Food Commissioner. The sale and shipment of eggs known as "heavy blood rings," "black spots," etc., is regulated.

The standards of quality, purity or strength, for food products, adopted from time to time by the Food Standards Commission and the regulations concerning the labeling of food

products, adopted from time to time by the State Food Commissioner constitute prima facie evidence in the trial of all cases in court of the proper standard or of the proper labeling: "Provided, that nothing in this section shall be construed to prevent the sale of any wholesome food product which is below such standard, if such article of food be labeled so as to clearly indicate such variation: Provided, further, that in all places where foods below such standards are sold in bulk or have been removed from its original package, there shall be placed in a prominent position a placard in large letters of not less than one inch in length which shall clearly indicate such variations so as to be easily read by customers.

Laws relating to false advertising, feeding stuffs and the sale of narcotic drugs were enacted.

The Uniform Sales Act was adopted.

INDIANA.

Chapter 184 relates to trading stamps and requires the payment of an annual license fee of \$1,000 for each separate place of business. Although this statute is most ambiguous, it seems that it was intended to apply to trading stamp companies only. Such companies doing business in any county cannot furnish stamps in that county for use in another county.

Chapter 174 relates to the loading and shipment of watermelons.

IOWA.

The general food law was amended and among other things the standards for vinegars were revised.

Amendments were also made to the statutes relating to bulk sales, agricultural seeds, weights and measures, milk products, including butter.

KANSAS.

An act was passed making void, as against the creditors of the seller, any sale of goods in bulk other than in the ordinary course of trade, unless the various steps set forth in the statute are taken for the protection of such creditors.

Chapter 2 prohibits false, misleading or fraudulent advertising.

Chapter 370 amends the law regulating the sale of commercial feeding stuffs.

Chapter 371 regulates the sale of farm produce on commission.

MAINE.

Chapter 110 establishes the standard bushel weight and the standard barrel weight of various commodities.

Chapter 266 requires manufacturers of standard apple barrels and boxes to affix thereto the words "standard barrel" and "standard box."

MASSACHUSETTS.

Chapter 158 requires cider vinegar, if diluted with water, to be labeled to indicate that fact, as for example, "Diluted to Legal Strength."

Chapter 239 provides for an official method for the estimation of solids and acetic acid in vinegars.

Chapter 187 would prohibit general merchants from selling opium and other narcotic drugs or preparations containing opium, except those specifically exempted by the Harrison Narcotic Law. Among those not exempted are laudanum, vinegar of opium, Dover's Powder, Tully's Powder, etc.

Chapter 55 amends the law relative to the sale of cold storage eggs at retail.

Chapter 261 establishes a standard barrel and a standard box for apples and also standard grades for apples grown in Massachusetts when packed in closed packages. The act also prescribes the manner of labeling packages with the variety, the quantity of contents, the name of the packer and other facts. Dealers are exempt from prosecution if they can furnish a guaranty from the person from whom they received the apples. Most of the provisions of this act do not become operative until July 1, 1916.

Chapter 43 amends the law relating to the standard bushel weight of fine salt.

MICHIGAN.

Act 311 amends the food law so that the provisions relating to misbranding, including weight or measure branding, shall not apply to fresh fruit and vegetables.

Laws relating to the sale of preparations containing opium or cocoa leaves or their derivatives and also to the sale of drugs generally were enacted.

Act 226 amends the law requiring the name of the manufacturer on labels of canned food and now permits the name of either the manufacturer or the distributor.

Act 288 regulates the sale of carbonated beverages, syrup extracts and soft drinks.

Act 269 regulates the sale of poisonous fly paper or fly killers.

Act 91 authorizes the State Board of Agriculture to undertake the investigation and improvement of market conditions and provides for the appointment of a director of markets.

Act 135 regulates the sale of feeding stuffs.

A new law regulates the sale of butter under a state brand and amendments were made to the law relating to the sale of renovated butter and oleomargarine.

MINNESOTA.

Chapter 18 regulates the sale and labeling of cold storage eggs.

Chapter 62 amends section 5046 of General Statutes, 1913, which prohibits general merchants from selling any drugs or medicines unless they employ a registered pharmacist.

Chapter 251 regulates the sale of commercial fertilizers.

Chapter 309 prohibits fraudulent advertising.

Chapter 335 amends the law relating to the sale of injurious canning compounds. Among other things, sulphurous acid is declared to be unwholesome and injurious.

Chapter 368 amends the law concerning the sale of butter and cheese.

Chapter 370 amends the law relating to commission merchants.

Chapter 260 regulates the sale of preparations containing opium and other narcotic drugs.

MISSOURI.

Untrue or misleading advertisements are prohibited.

The law relating to the sale of drugs was amended. General merchants are practically prohibited from dealing in preparations containing opium and other narcotic drugs except when such drugs are present in certain limited quantities as specified in the act.

The law relating to sanitation in food establishments was amended.

MONTANA.

Chapter 11 provides that such food products as meat, lard, eggs, butter or any other dairy products if imported from foreign countries must be labeled with name of country from which imported, the date shipped and the date received.

Chapter 57 amends the law establishing a standard box for apples and prescribing the labeling of apple boxes.

Chapter 117 defines and prohibits false advertising.

Chapter 134 prohibits the sale of drugs and medicines except by registered pharmacists or under the supervision of a registered pharmacist. This act, however, does not apply to the sale of patent or proprietary medicines in original packages when plainly labeled, nor to such non-medicinal articles as are usually sold by general merchants, nor does the act apply in certain other specified cases.

NEBRASKA.

Chapter 48 amends the law imposing license taxes on manufacturers and dealers in imitation butter and cheese.

Chapter 47 amends the law relating to the enforcement of the food laws.

Chapter 191 regulates the sale of agricultural seeds.

Chapter 192 regulates the sale of commercial feeding stuffs.

Chapter 193 regulates the sale of live stock remedies.

Chapter 195 prohibits the sale of preparations containing cocaine, opium, morphine and other narcotic drugs unless sold upon a physician's prescription. The act does not apply to preparations containing certain limited quantities of such drugs.

Chapter 141 amends the law as to the use of false weights and measures.

NEVADA.

Chapter 159 is the uniform sales of goods act.

Chapter 101 provides that preparations containing opium

and other specified drugs, except when present in certain limited quantities, shall be sold only upon the prescription of a physician.

NEW HAMPSHIRE.

Chapter 3 prohibits the use of wood alcohol in food.

Chapter 23 amends the law relating to the sanitary production and distribution of food.

Chapter 62 amends the pure food and drugs law by adding the Sherley provision relating to drugs.

Chapter 69 amends the statute regulating the sale of bread.

Chapter 118 regulates the sale of fungicides and insecticides.

Chapter 44 prohibits the use of false statements to obtain credit.

Amendments were made to the statutes concerning the sale of fertilizers, feeding stuffs, seeds and the commercial use of the United States or State flags.

NEW JERSEY.

Chapter 73 makes weight or measure branding of package food compulsory in this State. Reasonable variations are permitted. The State Board of Health is required to adopt the national tolerances and also exemptions as to small packages. This law is now in effect.

Chapter 357 prohibits the sale of any non-alcoholic drink or beverage which contains saccharin or any of the other ingredients specified in the act. Contains provisions regulating the labeling of limitations.

A law relating to the sale of preparations containing opium and other narcotic drugs was enacted.

Chapter 56 amends the law relating to the standard bushel weight for certain agricultural products named therein.

The Bulk Sales Law was amended.

A new law prohibits use of sulphur dioxide and certain other preservatives in meat and meat products.

NEW MEXICO.

The law relating to bulk sales was amended.

NEW YORK.

Section 390 of the General Business Law, requiring canned foods to be branded with the place of packing, and certain other information, was amended so as not to apply to goods packed in conformity with the Pure Food Law.

Chapter 233 prohibits the fraudulent use of the word "Kosher."

Chapter 217 amends the Agricultural Law establishing standard grades for apples and regulating the sale and branding thereof.

Chapter 569 prohibits the making of misleading statements or advertisements inducing the sale of property or to sell property by means of prizes and puzzle methods.

Chapter 72 amends the law relating to commercial fertilizers.

NORTH CAROLINA.

The general food law was amended and the weight or measure branding of package foods is now compulsory in this state. The Board of Agriculture is authorized to establish rules and regulations permitting reasonable variations. The act does not apply to packages retailing for six cents or less.

The law establishing the standard barrel and bushel weights for certain specified commodities was amended.

A new law regulates the sale of artificially bleached flour; among other things, flour artificially bleached with nitrogen peroxide of chlorine or other agent, must be branded "artificially bleached." Before selling such flour, the manufacturer, dealer or agent, or the person who causes it to be sold by sample or otherwise, must register with the Commissioner of Agriculture and must during the month of July, 1915, pay a fee of \$25 for each brand of flour registered and also a similar fee during the month of January in each succeeding year and before such flour is offered for sale in the State. This act took effect July 1, 1915, but flour on hand at the passage of the act (March 9, 1915), is exempt from its provisions.

It is made unlawful to sell or offer for consignment any barrel, crate or box or other receptacle containing fruit or vegetables to be shipped to any point within or without the State, unless branded with the name of the grower or packer.

Chapter 555 of the laws of 1909 relating to the labeling of meal and flour was amended so as not to apply to packages containing less than one-eighth of a bushel.

A law relating to fraudulent advertising was enacted.

NORTH DAKOTA.

The general food law was extensively amended. Among other things, food mixtures, compounds or blends must be labeled to show the true composition of the product in accordance with the regulations of the Food Commissioner, when essential to the public welfare and to prevent fraud and deception. All foods are deemed misbranded if they are not labeled with the designation prescribed by the Food Commissioner to indicate the grade of purity, quality and strength as compared with the standard fixed by the Commissioner.

The law requiring package food to be labeled with the net weight was amended to require the net weight, measure or numerical count.

OHIO.

Laws relating to the sale of agricultural lime, feedstuffs, commercial fertilizers and the sale of full cream cheese were amended.

OKLAHOMA.

Chapter 157 requires manufacturers of foods and drugs doing business in this State and all persons bringing into and offering for sale within the state any article of food or drugs to register annually with the State Commissioner of Health and pay a registration fee of \$1.00 on or before the first day of July in each year. Resident merchants who have paid the merchant's license tax are exempted from the payment of the registration fee.

Chapter 155 amends the provisions of the food law relating to enforcement, including the examination of samples claimed to be adulterated or misbranded.

Chapter 158, among other things, requires all grocery stores to pay an annual license fee of \$1.00.

Laws relating to false advertising and false statements to obtain credit were also enacted.

OREGON.

Chapter 330 requires all mill feed to be sold by weight.

Chapter 161 is a general weights and measures law.

Chapter 162 relates to the standard boxes or baskets for strawberries, blackberries, logan berries, raspberries and similar berries.

Chapter 228 levies an annual tax on the gross receipts of persons, firms and corporations using trading stamps.

Chapter 343 is a very lengthy measure and purports to revise and codify the food laws and the law on other related subjects. This act is substantially a re-enactment of existing law, but a few changes have been made, among others the following:

Maple syrup containing ingredients other than pure maple sugar syrup or maple sap syrup must be labeled with a statement of the ingredients, but *not the percentages* of ingredients as heretofore required.

The device or motto adopted and furnished by the Dairy and Food Commissioner and known as the Oregon State Brand is abolished and the use of such device or motto on packages of butter after January 1, 1916, is made unlawful. New requirements are made as to the branding of butter manufactured outside of Oregon, and those selling such butter must report to the Dairy and Food Commissioner concerning each shipment received.

Chapter 272 requires containers of eggs to be branded with the name of the place where the eggs were produced and contains labeling and other requirements for the sale of imported eggs and food products containing such eggs.

PENNSYLVANIA.

A comprehensive sales of goods act was enacted.

Act 143 makes the sale of chicory mixed with coffee lawful provided the amount of chicory does not exceed 15 per cent. and the package is labeled "Coffee and Chicory" in letters not less than one-half inch high. It is provided that the label may contain also the name and address of the manufacturer and distributor, a non-descriptive brand name and the net weight, but no other printed matter.

Laws relating to the sale of milk, meat food products, lime gypsum and related products were enacted.

Act 121 regulates the sale of grapes, fruits and vegetables and establishes standard containers, baskets and measures therefor.

Act 173 amends the law relating to bushel weights for various commodities.

Act 394 amends the weight or measure branding statute and provides that that statute shall not apply to the marking of the net quantity of the contents on containers or packages handled, sold, or offered for sale by wholesalers, jobbers or commission merchants.

The law relating to the sale of milk, skimmed milk and cream was amended.

RHODE ISLAND.

Chapter 1241 amends the food law relating to procedure in cases where adulterated or misbranded food is seized for condemnation.

Chapter 1190 regulates the sale of cold storage eggs and contains requirements as to branding and the exhibition of placards.

Chapter 1183 prohibits the sale of food containing wood alcohol.

SOUTH CAROLINA.

A law was enacted giving the Commissioner of Agriculture, Commerce and Industries power to make regulations governing the inspection and analysis of all preparations, compounds or mixtures used or sold as a beverage.

Laws relating to commercial fertilizers, commercial feeding stuffs and poultry tonics were also enacted.

SOUTH DAKOTA.

Chapter 191 amends the law relating to the sale of commercial feeding stuffs.

Chapter 160 relates to the sale of the poisonous drugs known as paris green, peroxide of hydrogen, formaldehyde, wood alcohol, rat poison, gopher poison and insect powder. Such drugs may lawfully be sold by general merchants located in the smaller towns, provided they are first licensed by the State Board of Pharmacy and comply with the various provisions of the act.

Chapter 161 in effect prohibits general merchants from dealing in preparations containing opium and other narcotic drugs except preparations containing certain limited quantities as specified in the act.

Chapter 307 regulates the labeling and sale of wood alcohol and prohibits the sale of any food, medicinal or toilet preparation that contains wood alcohol.

TENNESSEE.

Chapter 138 requires the name of the grower or packer on barrels, crates, boxes or other receptacles of fruits and vegetables.

Chapter 27 prohibits the sale of soft drinks containing more than one-half per cent. alcohol.

Chapter 175 amends the law relating to agricultural seed.

Chapter 105 prohibits fraudulent advertising.

TEXAS.

The law relating to the sales of goods in bulk was amended.

UTAH.

Chapter 104 is a general weights and measures law. It requires both wholesale and retail packages of food to be branded with the net quantity of the contents in terms of weight, measure or numerical count but does not apply to shipping cases when the contents are properly marked. Reasonable variations are permitted. Tolerances and exemptions as to small packages are to be established by the Dairy and Food Bureau. Other provisions regulate the sale of butter, process butter, oleomargarine, and bread. It is made unlawful to sell berries or small fruits in any other manner than by weight or in certain containers specified in the act. When commodities are sold by weight they are required to be sold by net weight.

Chapter 116 requires trading stamp companies to establish offices within the State.

Chapter 117 regulates the use of trading stamps and places a tax on trading stamp companies. Tax stamps must be affixed to books or other containers of trading stamps. Deal-

ers using trading stamps are also taxed and must affix tax stamps unless such stamps have been previously affixed by the trading stamp company. Such companies and also dealers must duly cancel the tax stamps used and must keep books of account showing dealings or use of trading stamps.

Chapter 66 regulates the sale of poisons and narcotic drugs, and among other things requires preparations containing opium or other narcotic drugs, except when present in limited quantities to be sold upon prescription of a physician.

VERMONT.

Act 165 fixes the legal weight of maple syrup.

Act 190 makes it unlawful for any person who is not a licensed pharmacist to sell at retail any drugs, chemicals or poisons.

Act 197 regulates the sale of opium, morphine and other narcotic drugs and preparations containing the same.

The uniform bills of lading law and laws relating to the enforcement of the food law were also enacted.

Act 169 establishes the standard barrel for apples. Non-standard barrels or containers must be labeled with the number of bushels contained therein. Standard grades are established for apples grown in Vermont when packed in closed packages. Various provisions are made as to the labeling of such packages.

VIRGINIA (Special Session).

Chapter 140 amends the law relating to the sale of commercial fertilizers.

WASHINGTON.

Chapter 31 repeals an old provision of the statutes requiring canned salmon to be branded with the name of the place where caught, the name of the State and the name of the packer.

Chapter 166 authorizes the Commissioner of Agriculture to adopt rules and regulations establishing standard grades for apples and regulating the packing thereof.

Chapter 159 is the Uniform Bills of Lading Act.

Chapter 94 regulates the sale of eggs and provides for the classification and labeling thereof.

WEST VIRGINIA.

Chapter 11 establishes a State department of health to supersede the State Board of Health.

Chapter 16 is a general weights and measures act prescribing bushel weights for various specified commodities. It also requires all commodities, including food, in package form to be labeled with the weight, measure and numerical count of the contents. Reasonable variations or tolerances and also exemptions as to small packages shall be established by rules and regulations made by the Commissioner of Weights and Measures. This provision does not apply to butter, oleomargarine and other commodities specifically regulated by other provisions of the statute. The word "package" is defined.

Chapter 44 prohibits the use of the United States flag or the State flag for commercial purposes.

Chapter 43 prohibits fraudulent advertising.

Chapter 36 regulates the sale of agricultural seed.

WISCONSIN.

Chapter 63 amends the law relating to bushel weights for various commodities.

Chapter 225 relates to standard containers for fresh fruits and vegetables and requires non-standard containers to be branded with the net weight or measure.

Chapter 474 amends the law relating to the standards for cheese.

Chapter 392 amends the law establishing a standard barrel for liquids.

Chapter 349 amends the law relating to agricultural seed.

The laws relating to false advertising and the making of false statements for obtaining credit were also amended.

WYOMING.

Chapter 71 amends the General Food Law and makes it more uniform with the national law. The Sherley provision as to drugs has been inserted and the Dairy, Food and Oil Commissioner is authorized to establish exemptions as to small packages under the weight or measure branding provision.

Chapter 79 relates to procedure in the enforcement of the food law.

Chapter 106 permits the sale of preparations containing opium and other narcotic drugs upon a physician's prescription only.

Chapter 78 regulates the sale and labeling of poisonous drugs and chemicals.

Chapter 76 prohibits the use of false statements to obtain property or credit.

AMEND NET WEIGHT REGULATIONS.

A modification of the regulations for marking the weight or measure of the contents of food packages has been announced recently by the United States Department of Agriculture in Food Inspection Decision 163. This decision allows the use of fractions in indicating weight and measure when there exists a definite trade custom for their use. Under previous rulings a package containing one-half gallon should be marked as two quarts, but now it may be marked as one-half gallon. This decision permits the trade to follow in this respect established customs of marking, if the marking is plain and conspicuous and in no way misleading to the consumer.

The decision permits the use of the metric system in marking food packages, when this system is preferred, and specifies the terms in which weight or measure should be stated when the metric system is used. The decision follows:

Regulations 29 of the Rules and Regulations for the Enforcement of the Food and Drugs Act is hereby amended by striking out paragraphs (d) and (e), and substituting therefor the following:

(d) If the quantity of the contents be stated by weight or measure, it shall be marked in terms of the largest unit contained in the package, except that, in the case of an article with respect to which there exists a definite trade custom for marking the quantity of the article in terms of fractional parts of larger units, it may be so marked in accordance with the custom. Common fractions shall be reduced to their lowest terms; decimal fractions shall be preceded by zero and shall be carried out to not more than two places.

(e) Statements of weight shall be in terms of avoirdupois pounds and ounces; statements of liquid measure shall be in terms of the United States gallon of 231 cubic inches and its customary subdivisions, i. e., in gallons, quarts, pints, or fluid ounces, and shall express the volume of the liquid at 68° F. (20° C.); and statements of dry measure shall be in terms of the United States standard bushel of 2,150.42 cubic inches and its customary subdivisions, i. e., in bushels, pecks, quarts, or pints: Provided, That statements of quantity may be in terms of metric weight or measure. Statements of metric weight should be in terms of kilograms or grams. Statements of metric measure should be in terms of liters or centiliters. Other terms of metric weight or measure may be used if it appears that a definite trade custom exists for marking articles with such other terms and the articles are marked in accordance with the custom.

CONTROL FOOD COLORS.

A food inspection decision has been issued by the U. S. Department of Agriculture permitting the use of tartrazine in coloring food products. Investigations have shown this color to be harmless and suitable for coloring foods. It is manufactured in large quantities in the United States. Seven other coal-tar dyes have been permitted in foods since the enactment of the Food and Drugs Act. Samples of all dyes certified by the manufacturers are examined in the Bureau of Chemistry and only such dyes permitted as are free from impurities and harmful substances.

Another decision has recently been issued making more stringent requirements in reference to the certification of coal-tar dyes when mixed with substances not coal-tar dyes. This decision provides that hereafter the manufacturer shall deposit with the Secretary of Agriculture a declaration that every package in which any such mixture is sold shall have a plain and conspicuous statement of the quantity or proportion of the certified dyes present in the mixture.

New Home of Price Flavoring Extract Co.



The new home of the Price Flavoring Extract Company, at 237-239 E. Superior St., Chicago, affords model accommodations for the manufacture of this thriving concern's world-famous products, the principal of which are Dr. Price's Delicious Flavoring Extracts and Dr. Price's Jelly Dessert.

From the standpoint of light, air and general sanitary conditions, it would be impossible to suggest improvement in the scheme of this splendid structure. Every modern device which has been proven of value to health or scientific management has been adopted and put into action here.

The structure is of white tileing and takes in five floors

and basement. Nothing but the highest grade equipment is in use throughout the large plant.

To those familiar with the sterling quality of all products manufactured by the Price Flavoring Extract Company, it will be no source of wonder that this firm should make it a matter of personal pride to build a home for the establishment which may very truly be termed the last word in model factory building.

Throughout the long and eminently successful career of this concern, the products of the Price Flavoring Extract Company have gone steadily ahead, basing their claim for

recognition on merit alone. Today these products are foremost in the land and recognize no peer in their respective lines.

The perfection of Dr. Price's Delicious Flavoring Extracts was made possible through the new process for extracting from the true fruits their natural properties. Dr. Price's Jelly Dessert is a combination of pure refined gelatine, pure flavors, refined sugar and lemon acid scientifically prepared.

The American Food Journal wishes to avail itself of this opportunity to extend to the Price Flavoring Extract Company its sincere wishes for continued success in its very important field. The purity of Dr. Price's flavors assures the company of the unquestioning confidence of the consumers, who have long since learned the advantage of guarding against the dangers which are common in the use of the ordinary flavoring extracts on the market.

Patents and Copyrights

The following patents of interest to readers of this journal recently were issued from the United States Patent Office. Copies thereof can be obtained from R. E. Burnham, patent and trade-mark attorney, 882 Bond Building, Washington, D. C., at the rate of 20 cents each. State number of patent and name of inventor when ordering.

1,164,566. Sugar-wafer machine. Leonard Aunes, Cambridge, Mass.

1,164,861. Process for temporarily preserving shelled peas and similar vegetables. Clarence H. Plummer, Kewaunee, Wis.

1,164,944. Icing machine. Edward Legler, Kansas City, Kans.

1,164,947. Roll-molding machine. William L. McCandless, Pittsburgh, Pa.

1,164,948. Popcorn-coating device. Charles E. McCarren, Cincinnati, Ohio, assignor to Samuel S. Kingery, Norwood, Ohio.

1,165,035. Forming, charging and removing device for bakers' ovens. Aron Streit, New York, N. Y.

1,165,107. Nut bursting or cracking machine. Robert Lund and Thomas F. Hind, Preston, England.

1,165,110. Transporting receptacle for eggs and similar articles. Ira A. Milliron, New York, N. Y., assignor to Hammock Egg Carrier Co.

1,165,199. Process of making soy-milk. Louis J. Monahan and Charles J. Pope, Oshkosh, Wis.

1,165,217. Beefsteak defiberizing machine. George W. Wemple, Minneapolis, Minn.

1,165,220. Process for sterilizing and preserving grain. Edward R. Barrow, Memphis, Tenn.

1,165,223. Ham presser and cooker. Clarence Butz, Muscatine, Iowa.

1,165,389. Carcass-splitting machine. Daniel E. Clifford, Ware, Mass.

1,165,409. Baking oven. C. Wells Helm, Chicago, Ill.

1,165,415. Manufacture of beverage extracts. John L. Kellogg, Battle Creek, Mich.

1,165,556. Corn-popping machine. Daniel H. Talbert, Indianapolis, Ind.

1,165,757. Apparatus for sterilizing or cooking canned goods. Justin B. Cook, Tempe, Ariz.

1,165,802. Food from banana and milk and method of preparing same. Hugh E. Plunkett, Malden, Mass., assignor, by mesne assignments, to United States Tropical Food Co., same place.

1,165,921. Apparatus for sterilizing milk. Max von Recklinghausen, New York, N. Y., assignor to the R. U. V. Co., Inc., same place.

1,165,924. Preparation of meat products. Herbert Watkins-Pitchford, Weybridge, England.

1,165,925. Nutritive preparation. Herbert Watkins-Pitchford, Weybridge, England.

1,166,056. Process of forming filled wafers. Edward E.

Lawrence, Cambridge, Mass., assignor to Loose-Wiles Biscuit Co., Kansas City, Mo.

1,166,240. Candy-coating machine. Edward J. Momenee, Lima, Ohio.

1,166,519. Dough-feeding machine. Herman and Arthur H. Hayssen, Sheboygan, Wis.

1,166,588. Process of preserving fruit. Addison F. Hoffman, New Cumberland, W. Va.

1,166,592. Process of treating grains. Adolph Jaeger, Jackson, Mo., assignor of 22½/100 to Arthur O. Knight and 22½/100 to Harry A. Knight, St. Louis, Mo.

1,166,610. Candy machine. Frederick W. Lovelady, Saginaw, and Bernard J. Kennedy, Detroit, Mich., assignors of one-third to George F. Dice, Saginaw, Mich.

1,166,674. Utilization of waste from pineapple. Ralph A. Gould and Charles S. Ash, San Francisco, Cal.

1,166,867. Apparatus for separating juice from citrus fruit. Jokichi Takamine, New York, N. Y.

1,166,887. Sauce-powder. Matias Chila, Whiting, Ind.

1,167,005. Cherry-pitting machine. Charles H. Marshall, Omaha, Neb.

1,167,006. Process of exhausting unfermented grapes or berries. Eudo Monti, Turin, Italy.

1,167,133. Method of making shortened food products. Thomas F. Tierney, Watertown, Mass., assignor to Economy Food Products Co., Cambridge, Mass.

1,167,187. Dough-molding machine. Frank X. Lauterbur, Sidney, Ohio.

1,167,193. Process of making sterilized granulated meat fiber. Charles Marchand, New York, N. Y., assignor, by mesne assignments, to Louis N. Depeyre, Colorado Springs, Colo.

1,167,443. Meat-holding mechanism for slicing machines. Howard Stephenson and Joseph L. Howard, Brantford, Ontario, Canada, assignors to Brantford Computing Scale Co., Ltd., same place.

1,167,512. Fruit-grading machine. James R. Nunamaker, Hood River, Ore.

1,167,563. Fruit-snow. John B. Ingram, Los Angeles, Cal.

1,167,573. Carcass scraping and polishing mechanism. John W. Kohlhepp, Chicago, Ill., assignor to the Albright-Nell Co.

1,167,703. Process of manufacturing bread from whole grain. Bertha Leibbrandt, Santa Cruz, Cal.

1,167,956. Process of treating cocoa. John Walker, Boston, Mass., assignor to Massachusetts Chocolate Co., same place.

1,168,075. Roll-machine for reducing cereals to filamentous form. John E. Hutzen, Pittsburgh, Pa.

1,168,203. Vegetable-cutting machine. Carl Heilinger and Mathias Lisatz, Los Angeles, Cal.; said Lisatz assignor to said Heilinger.

1,168,240. Starch machine. Alonzo L. Bausman, Springfield, Mass., assignor to National Equipment Co., same place.

1,168,254. Sanitary wrapper for bread and the like. Emil Frisch and Oscar C. Miessler, Chicago, Ill.

1,168,305. Tamal machine. Harry H. Hood, Chicago, Ill., assignor to Spragur Canning Machinery Co., same place.

1,168,330. Cheese-press. Hugo F. Reinhold, Plymouth, Wis., assignor to Reinhold & Meyer Mfg. Co., same place.

1,168,355. Electric bone-saw. Frank F. Wear, San Francisco, Cal., assignor to the Alvey-Ferguson Co., Oakley, Cincinnati, Ohio.

1,168,379. Sharpening device for slicing-machine knives. Pieter C. de Groot, Rotterdam, Netherlands, assignor to U. S. Slicing Machine Co., Chicago, Ill.

1,168,484. Folding shipping-crate for eggs. Cilos C. Dalton, Star, Va.

1,168,695. Art of preserving food products and apparatus therefor. John M. Young, San Francisco, Cal., assignor to American Can Co., same place.

1,168,722. Apparatus for drying alimentary paste. Emanuel Guano, Chelsea, N. J.

1,168,726. Skinning tool. Frank Jackson, Chicago, Ill.

1,168,788. Paring machine. Burton C. Coons, Rochester, N. Y.

Official Program of the Ninth Annual Convention of the National Cannery Association, to Be Held at Louisville, Feb. 7-11

THE Ninth Annual Convention of the National Cannery Association will open Monday, February 7, at Louisville, Ky. The full official program follows:

MONDAY, FEBRUARY 7.

Sessions will commence promptly at the appointed time. Because of the long and important program it will be necessary to call meetings at the hour indicated.

Exhibition hall open all day. Everyone is urged immediately upon arrival to come to the Secretary's office at the Hotel Seelbach and register. It is exceedingly important that each person register immediately upon arrival, as the official badge will be necessary to obtain admission to the exhibition hall and convention halls.

Monday afternoon at 2:30 o'clock, meeting of directors of National Cannery Association in the leather room, Hotel Seelbach. It is important for all directors to attend this meeting.

AUDITORIUM HALL, HOTEL SEELBACH, 7:20 O'CLOCK.

Moving pictures of the city of Louisville.

OPENING SESSION, 8 O'CLOCK, AUDITORIUM, HOTEL SEELBACH.

Fred W. Keisker, president Louisville Convention and Publicity League, presiding.

Instrumental music, "Star Spangled Banner."

Invocation, Rev. E. L. Powell, D. D.

Kentucky greetings, His Excellency, Hon. A. O. Stanley, governor.

City of Louisville, Hon. John H. Buschmeyer, mayor.

Response, Richard Dickinson, first vice-president National Cannery Association, Eureka, Ill.

Addresses of presidents: George N. Numsen, president National Cannery Association; A. F. W. St. John, president Canning Machinery and Supplies Association; William H. Nicholls, president Canned Foods and Dried Fruit Brokers' Association.

Address, Hon. J. Harry Covington, chief justice Supreme court, District of Columbia.

ANNOUNCEMENT OF CONVENTION AND SPECIAL COMMITTEES.

The recommendations of the president of the National Cannery Association will be furnished in printed form, together with the report of the secretary.

TUESDAY, FEBRUARY 8, 10 A. M., AUDITORIUM, HOTEL SEELBACH.

Exhibition Hall Closed Until 1 P. M.

"Co-operative Insurance," Lansing B. Warner, Cannery Exchange, Chicago, Ill.

"Food Officials Boosters, Not Knockers," Dr. H. E. Barnard, State Food Commissioner, Indianapolis, Ind.

Address, W. F. Bode, representing the National Wholesale Grocers' Association.

"Principles of Standardization," Dr. William Frear, committee on definitions and standards, National and State Food Officials.

"The Development of Foreign Trade," Dr. E. E. Pratt, chief Bureau of Foreign and Domestic Commerce, Washington, D. C.

Address, J. H. McLaurin, president Southern Wholesale Grocers' Association, Jacksonville, Fla.

"Laboratories of the National Cannery Association," Dr. W. D. Bigelow, chief chemist, National Cannery Association.

Report of committee on nominations.

Election of officers.

TUESDAY AFTERNOON.

Exhibition Hall Open.

2 o'clock.—The ladies of the convention are requested to assemble on the mezzanine floor of the Hotel Seelbach for a theater party. At this meeting an announcement will be made of a luncheon to be given in honor of the ladies on the following day, and also other entertainments to be provided.

3 o'clock.—Special demonstration of machinery in the armory on the occasion of a visit of state and other food officials.

WEDNESDAY, FEBRUARY 9, 10 A. M.

Exhibition Hall Closed Until 1 P. M.—Open Wednesday Afternoon and Evening.

MEETING OF PEA SECTION.

LIBRARY AND BILLIARD ROOM, ARMORY, 10 O'CLOCK.

Secretary's report.

Chairman's report.

Appointment of nominating committee.

"Wisconsin Seed Laws," J. A. Hageman, Fort Atkinson, Wis.

"The New Aspect of the Pea Packing Business," Henry Burden, Cazenovia, N. Y.

"Daily Market Reports," report of results in the Tomato Section, E. A. Kerr, Baltimore, Md.

"Practical Problem Exchange, in Charge of Committee," A. G. Tamm, chairman.

Report of nominating committee.

Election of officers.

MEETING OF TOMATO SECTION.

GYMNASIUM ROOM, ARMORY, 10 A. M.

Chairman's report.

Secretary's report.

Appointment of nominating committee.

"The Daily Market Report Demonstrates Its Efficiency and Proves Its Right to Recognition and Support," F. A. Torsch, former president Baltimore Canned Goods Exchange.

"How Can the State Cannery Associations Gather and Publish Statistics?" F. M. Shook, secretary and treasurer Ohio Cannery Association.

"Warehousing and Banking Facilities for the Legitimate Canner," George W. Drake, secretary and treasurer Western Cannery Association.

"Cost Accounting," William Silver, Aberdeen, Md.

"Co-operative Advertising," Edward A. Kerr, president Baltimore Canned Goods Exchange.

"The Canned Foods Label Should Describe Quality Clearly and Frankly," John R. Baines, Baltimore.

"Future Sales, Considered Especially in Relation to Canned Tomatoes," John A. Lee, Chicago.

Report of Nominating Committee.

Election of officers.

MACHINERY AND SUPPLIES ASSOCIATION.

The Machinery and Supplies Association will hold its annual meeting at 10 o'clock, Hotel Seelbach.

10 O'CLOCK.

WEDNESDAY AFTERNOON, 2:30 O'CLOCK.

Informal meeting of State Food Commissioners and other food officials, red room, Hotel Seelbach.

Exhibition hall will be open Wednesday evening. Admission by card or badge.

THURSDAY, FEBRUARY 10, 10 A. M.

Exhibition Hall Closed Until 1 P. M.

MEETING OF CORN SECTION.

LIBRARY AND BILLIARD ROOM, ARMORY, 10 O'CLOCK.

"Distribution and Consumption," Walter J. Sears, Chillicothe, Ohio.

"Cost Accounting," Daniel G. Trench, Chicago, Ill.

"Investigation of Insect Enemies of Corn," Ira S. Whitmer, Bloomington, Ill.

"Statistics," George W. Drake, Circleville, Ohio.

"Standards," J. W. McCall, Gibson City, Ill.

"Daily Market Reports," E. A. Kerr, Baltimore, Md.

Report of Nominating Committee.

Election of officers.

Discussion of scoring corn.

MEETING OF MILK SECTION.

MEZZANINE DINING ROOM, HOTEL HENRY WATSON, 10 O'CLOCK.

"Method of Determining Solids and Fats as Approved by the Association of Official Agricultural Chemists," H. E. Otting, Columbus, Ohio.

"General Publicity and Educational Work on the Use of Canned Milk," J. B. Cook, Tempe, Ariz.

"Development of Export Business," W. M. Gladding, New York city.

"Proper Advertising Copy," Walter Page, Chicago.

"Pertinent Suggestions for Figuring Costs."

Report of nominating committee.

Election of officers.

MEETING OF KRAUT ASSOCIATION.

PARLOR B, HOTEL SEELBACH, 10 O'CLOCK.

"Standardization of Sauer Kraut, Both in Cans and in Bulk," A. E. Slessman, president National Kraut Packers' Association, Fremont, Ohio.

"The Fermentation of Sauer Kraut," Dr. L. A. Round, Bureau of Chemistry, U. S. Department of Agriculture, Washington, D. C.

Report of committee on advertising.

General discussion of acreage and market conditions.

THURSDAY EVENING.

American Can Company—Theater party tendered by American Can Company at B. F. Keith's theater.

FRIDAY, FEBRUARY 11, 10 O'CLOCK, AUDITORIUM, HOTEL SEELBACH.

Reports of committees:

Co-operative Committee with Wholesale Grocers' Association—Richard Dickinson, chairman.

Scientific Research—Henry Burden, chairman.

Adjustment and Information—E. V. Stockham, chairman.

Sanitation—F. M. Shook, chairman.

Resolutions—S. F. Haserot, chairman.

Publicity—W. C. Leitsch, chairman.

Finance—W. C. Leitsch, chairman.

Foreign Trade—C. H. Bentley, chairman.

Panama-Pacific Exhibit—Dr. J. T. Dorrance, chairman.

Exhibition hall open all day Friday. Exhibits will remain intact until Saturday morning.

PROGRAM OF THE THIRTEENTH ANNUAL MEETING OF THE NATIONAL CANNED FOODS AND DRIED FRUIT BROKERS' ASSOCIATION.

RED ROOM, THE SEELBACH,

Louisville, Kentucky, Feb. 7-8-9, 1916.

MONDAY, FEBRUARY 7, 8 P. M.

Joint Meeting with National Cannery Association and Canning Machinery and Supplies Association, Auditorium, The Seelbach Hotel.

TUESDAY, FEBRUARY 8, 10 A. M.

Meeting of Members of National Canned Foods and Dried Fruit Brokers' Association, in Red Room, The Seelbach. Roll Call.

Reading of Minutes of Previous Meeting.

Report of President.

Address: Mr. Geo. N. Numsen, President, National Cannery Association.

Address: Mr. C. E. Wilcox, Vice-President Sprague, Warner & Co., Chicago.

Address: Mr. A. F. W. St. John, President, Canning Machinery and Supplies Association.

Report of Secretary.

Report of Treasurer.

Appointment of Committee on Nominations and Committee on Resolutions.

WEDNESDAY, FEBRUARY 9, 10 A. M.

Report of Executive Committee.

Report of Standing Committees.

New Business. "Splitting Brokerages"—it is desired to have a full, frank discussion of this serious menace to the brokerage business with a view to effecting some remedy for it.

A discussion of any other subject under this heading for the betterment of the brokerage business will be welcomed, likewise any suggestion of work that the Association might undertake for the benefit of its members.

Report of Committee on Resolutions.

Report of Committee on Nominations.

Election of Officers.

Adjournment.

BENZOATE BATTLE IN WISCONSIN.

A fight for the admission of their product into the State of Wisconsin, on the ground that the state law is in contradiction to federal pure food laws, was begun in the Federal Court at Madison, Wisconsin, recently, when the Curtice Brothers Co. of Rochester, New York, petitioned Federal Judge A. L. Sanborn to restrain George J. Weigle, State Dairy and Food Commissioner, from enforcing the state food law against the sale of products containing benzoate of soda in Wisconsin.

The bill filed by the attorneys for plaintiff declares that the Federal laws allow such sale in Wisconsin and adds that the Department of Agriculture has ruled that benzoate of soda is not harmful.

Thus far, Commissioner Weigle has failed to recognize the Federal statutes which give a clean bill of health to the product of the plaintiff company. In the bill Judge Sanborn is asked to order the commissioner to recognize the Federal statute where it is in conflict with the Wisconsin laws.

It will be remembered by readers of this journal that in a previous controversy over corn syrup problem the state suffered defeat at the hands of Judge Sanborn.

Commissioner Weigle was not at that time filling his present office and he now declares that his only duty is to enforce the state laws and that he will not recognize the Federal statutes when these conflict with the state laws or regulations unless ordered to do so by a Federal Court.

It is more than likely that a very interesting case will develop as the result of the action taken by the Rochester company.



Washington D. C. News Letter



THE government is doing all it can to revive the old query, "What is whiskey?" by resuming the trial of the case of the Louisiana Distillery Co. against Seyburn, who was collector of internal revenue at New Orleans a few days ago. Several years ago the complaining distilling company clapped an injunction on the collector and his deputies forbidding them to mark neutral spirits in accordance with the Taft decision as to what is entitled to be called whiskey. Ever since that time the neutral spirits made by the complainant has been marked in the old way, so that a rectifier not aware of the fact that that complainant makes its spirits from molasses might fall afoul of the food and drug act by using molasses spirits in blending with high wines to produce blended whiskey.

The object of the suit was to forbid the government making any distinction between neutral spirits based on the character of the raw material. Under the Taft decision any grain distillate reduced to potable strength is entitled to be called whiskey. Under the terms of the Taft decision so-called straight whiskey, the kind with all the fusel oil in it, mixed with neutral spirits may be called blended whiskey.

The appearance of Dr. Harvey W. Wiley on the witness stand, willing to qualify as an expert, however, is the interesting phase of the whole story. He did that a short time ago when the taking of testimony was resumed in Washington. He said he is an expert in the matter of distilled spirits; that he knew about stills and so forth and the making of alcoholic beverages.

The testimony of the former chief of the bureau of chemistry was to the effect that neutral spirits are neutral spirits no matter how made or from what raw materials and are entitled to be so labeled. Of course he was testifying for the complainant, that company's desire being, as might be suspected, to get away from the part of the Taft decision that beverages made from molasses shall be called rum. The point in the contention is that while the Taft decision says that, it also says that whiskey mixed with neutral spirits is entitled to be called blended whiskey.

The doctor got along famously so long as he was telling his story under the leadership of the attorney for the complainant. In the language of Potash & Perlmutter, it "was something difference" when Special Assistant Attorney General Arnold began testing his qualifications as an expert in distillery processes. His direct testimony was argumentatively to the effect that it is a contradiction of terms to say a spirit is neutral and then in the next breath declare that because it is made from molasses it may not be used in blending so-called straight whiskey because it has the aroma or flavor of rum, because a spirit to be neutral must have neither flavor nor aroma. He said that the processes have been so refined that the product betrays nothing as to the origin of the spirit.

In a jocular way of speaking the ancient and honorable bell-wether of the holier-than-thou crowd blew up when the government attorney handed him the blue prints of a still and asked him to testify as to what kind of a still it was. The doctor looked at it for the fraction of a second and then said he could not make head or tail of it. He had described the old-fashioned pot still, which, according to the general impression, is to be found only among the least progressive of the moonshiners—the men who dare not come out into the open and equip themselves with the modern and efficient machinery of those of their competitors who live up to the revenue laws. He impatiently told the assistant attorney general that he did not profess to be a mechanical expert who could look at blue prints and tell what manner of machine would come out of the wash if a mechanic followed the plans and executed them in a workmanlike manner.

The expert had to take a side wipe at the Taft definition by saying that under the Taft decision, inasmuch as blending

with neutral spirits entitled the blender to call his product whiskey, the mixing of whiskey and neutral spirits made from molasses could and should not be forbidden.

Chemists of the department of agriculture are inclined to agree with their former colleague in his assertion that it is impossible, by either taste or smell, to detect the difference, if there is any, between neutral spirits made from molasses or neutral spirits made from grain or any other substance. There are a few men in the department who think they can tell the difference at the instant a bottle of molasses spirit is uncorked by reason of what they call a faint smell of rum. But practical tests have shown that the average trained nose cannot detect any difference. The untrained one has not a chance in a test of that kind because the difference, when there is any, is so small that if the trained nose detects it, it is the result more of luck than positive knowledge.

If the temporary injunction is made permanent, the government will be under a moral obligation to re-cast the regulations under the food and drugs act. The revenue law says spirits shall be branded according to their trade names. The food and drug act forbids misrepresentation. According to the contention of the complainant in this case it produces a spirit so neutral that it is desired by the cologne trade, the most discriminating and particular of all the industries using spirits. It insists that the government shall therefore brand its products in such a way that the trade shall know, by examining the brands on the barrels, what it is buying and not be confused by having a neutral or cologne spirit called rum because it is made from the same raw material that must be used if rum is desired.

The Washington understanding is that the grain distillers are the ones that are urging the government to proceed with the case so that the matter may be disposed of. They believe the spirits made from molasses are not neutral, but if they are, removal of any doubt on that point will be for the benefit of the trade. It will then know where it stands and make its plans accordingly.

A most interesting situation will arise in the event the injunction is made permanent. If molasses spirits are neutral, then they may be used in making blended whiskey. That would make a big inroad in the business of the grain distillers because, while sugar and molasses are on the free list or the duty is low, and grain is high, the competition of the molasses spirits will be keen. In the event sugar and molasses are put back on the protected list, the domestic sugar industry will be greatly stimulated again because when the threat of free trade descended on the sugar industry farmers were just beginning to learn that planting beets was a good way to keep their land in good condition for other crops. Therefore beet growing is likely to become an industry almost regardless of the price obtained for the roots.

HOSIER IN A NEW PLACE.

Edward B. Hosier, one of the best known wholesale grocers of New York and formerly treasurer of the New York State Wholesale Grocers' association, became New York City manager for Austin, Nichols & Co., in charge of the Hudson street office, on the first of the year. Mr. Hosier has been in the wholesale grocery business ever since he left school, some 35 years ago, and, entering the employ of Oscar G. Rafferty, remained there until he became a partner in the firm of Rafferty & Hosier. After the retirement of Mr. Rafferty, six or eight years ago, Mr. Hosier connected the business and himself with Clark, Chapin & Bushnell, and when that house was merged with Austin, Nichols & Co. in the great Kent avenue plant in Brooklyn, Mr. Hosier continued his association as a special salesman and during its introductory stages as manager of the company's Harlem station.



Notes from Field of Food Control



THE Illinois Food Commission held a hearing, Tuesday, February 1, on wrapped hams and bacon, preliminary to making such ruling as the commissioner may see fit on the question of a meat wrapper being or not being a package under the Illinois law. All the packers, practically, were represented, as were also the National Wholesale Grocers' Association and the national associations of retail grocers and retail butchers. No decision was rendered at the close of a strenuous day.

* * *

¶ The state dairy and food commissioner of Iowa, whose duty it is to enforce the weight and measures law, may prosecute grain buyers who are following the practice of weighing in corn at eighty pounds to the bushel instead of seventy as the law specifies. While it has long been the custom to buy corn at this season of the year at eighty pounds to the bushel because of the extra weight due to moisture in the corn when it is first husked, nevertheless it is against the law. Last year Commissioner Barney prosecuted several grain buyers for violations of this law. He declares his inspectors are watching out for further infractions. In case the buyer and seller enter into a contract in writing that eighty pounds shall constitute a bushel in buying corn then the state would have no grounds for prosecution. Warnings are being sent out to dealers against selling cranberries by liquid measure. They must be sold by dry measure or by the pound, the dairy department says.

* * *

¶ Twenty-seven druggists and five wholesalers of Chicago will be prosecuted for selling bogus or adulterated aspirin and acetyl salicylic acid as a result of a report received by Health Commissioner Robertson. The inquiry was conducted by a committee of health department employees appointed by Dr. Robertson. The evidence was turned over to City Prosecutor Harry B. Miller, who announced he would prosecute. The penalty is a fine of \$100 to \$200. The wholesalers whose prosecution is recommended are Philip A. Born Company, I. A. Galler, the Chicago Tablet Company, Mertz & Drury and Allworth & Co. The report of the committee asserted druggists were in the habit of taking the word of peddlers of drugs as to their purity, and that only two out of twenty-seven made any attempt to procure a qualitative analysis. It should be pointed out at this time that it was The American Food Journal that brought about the investigation which has resulted in the squelching of one of the most dastardly and brazen frauds ever perpetrated on an unsuspecting public.

* * *

¶ More than 58,000,000 animals were slaughtered in establishments under Federal meat inspection during the fiscal year ending June 30, 1915, according to a statement made public by the Department of Agriculture recently. Of the animals subjected to Federal inspection, 299,958 were condemned as unfit for human use and 644,688 were condemned in part. These figures include only cattle, calves, sheep, goats and swine. Tuberculosis was the chief cause of the condemnations. More than 32,644 carcasses of cattle and 66,000 carcasses of swine were entirely rejected on account of this disease, and in addition parts of 48,000 cattle and 440,000 swine. Hog cholera was responsible for the next largest loss, nearly 102,000 swine being condemned entirely on this account. In the course of its work, the Bureau of Animal Industry, which is in charge of the meat inspection service, has discovered a new method of destroying trichinae in pork, which is an additional safeguard to human health. Refrigeration at a temperature of five degrees F., or lower, for a period of twenty days, will destroy these parasites, it is declared. In this connection it is interesting to note that more swine were slaughtered in the past year in establishments under Federal inspection than ever before. A total of 36,247,958 were inspected at the time of slaughter and approximately 35,900,000 passed for food.

¶ The Sherley amendment to the pure food law has been sustained by unanimous decision of the Supreme Court, voiced in an opinion that was written by Justice Hughes. The amendment forbids misbranding of food products or drugs and has been a thorn in the side of unscrupulous manufacturers who sought to foist worthless wares upon the public under promises of impossible performance. Misbranding, by the court's decision, is held to apply to false claims for the virtues of an article, such as the curative value of a so-called remedy, and to include pamphlets or circulars distributed with the package in which the article is contained as well as the wording on the actual label. By thus sustaining the law and giving it broad interpretation the court has made it an effective instrument for the prosecution of fakers and the protection of honorable manufactures. The people have now a weapon with which they can fight those who prey upon the fears engendered by disease or profit by the ignorance of the public and its gullibility.

* * *

¶ The Secretary of the Treasury has appointed the following tea experts on the U. S. Board of Tea Experts for the coming season: J. J. McNamara, Brooklyn, N. Y.; H. G. Woodworth, Boston, Mass.; Arthur T. Hellyer, Chicago, Ill.; C. E. Wyman, St. Paul, Minn.; E. R. Rogers, Tacoma, Wash.; George W. Caswell, San Francisco, Cal., and George F. Mitchell, Charleston, S. C. (Supervising Tea Examiner, Treasury Department). It will be noticed from the location of the different members of the Board that there are two representatives from the West, two from the central United States, two from the East, and the seventh, the direct representative of the Government, from the South. As the Board is now constituted there are three members from the importing trade, three from the jobbing and wholesale trade, and the direct representative of the Government. The first meeting will be held February 14, at 10:00 a. m., at the U. S. Appraiser's Stores, 641 Washington St., New York, at which time the tea standards that go into effect on May 1, 1916, by which the purity, quality, and fitness for consumption of all teas entering the United States are measured, will be selected and recommended to the Secretary of the Treasury for adoption.

* * *

¶ "I have more respect for the man who meets me on a dark night, pokes a gun in my face and orders me to hand him my valuables, than for the man who conducts an insanitary, filthy dairy plant and peddles diseased milk. The former may take my valuables and perhaps my life. The latter may take the lives of many and imperil future generations."—H. A. Morey, state dairy inspector. That 50 per cent of the dairies serving residents of Oklahoma City now are insanitary and unfit to operate is the declaration of H. A. Morey, state dairy inspector in the employ of the state board of agriculture, who has the past two weeks, conjointly with Dr. A. A. Doughty, city milk inspector, has been making an inspection of local dairies. The inspectors report that the condition of most dairies is deplorable and such as would shock the people of this city if they could be aroused to a realization of the true status. Cows were found at the feeding troughs standing in their own filth up to their knees, vile from a sanitary standpoint, and in many instances with udder ulcerations that were preyed upon by flies. In such cases the eggs from the insects drop into the containers when the animals are milked. "If there is one request I might be permitted to make of the mothers of Oklahoma City above all others," said Inspector Morey, "it is that they awake to the peril that confronts them and know the conditions that pertain to their family milk supply. They should demand of their milkman to know whether the cows from which the milk is secured have been tuberculin tested." The state department has issued notices to all dairymen whose places and service have been found defective that, unless they comply with the law, they will be compelled to quit the business.

¶ Ten thousand Chicago club-women, through their representatives in a meeting of the Chicago Housewives' League, recently pledged themselves to insure the purity of butter purveyed to the public in future. Rigid government inspection of creameries and the pasteurization of all cream used in butter manufacture will be features of the campaign. "Oleomargarine is scrupulously clean because the factories are watched by the government," said Mrs. Archie F. Corken, secretary of the organization, which until recently was the Chicago Clean Food Club. "We want the same precautions taken in the butter making plants. At present the cream used is full of germs and filth." The women further pledged themselves to taboo all flour not packed in sanitary sacks. Because of this agitation, started several weeks ago, several State street stores and wholesale groceries have adopted the paper sack advocated by the league. As a factor in cutting the cost of living as well as co-operating with the local grocers, the women agreed to cut delivery costs by combining a multitude of small orders into a single daily one. Sunday buying was discountenanced, and a strong effort will be made to eliminate it from the housewives' habits.

* * *

¶ A warning has been issued by Harry L. Eskew, state food and drug commissioner of Tennessee, in regard to the practices of some country people in adding preservatives to home-made sorghum, molasses and maple syrup and other products, which they intend to offer for sale. The state law specifically states that no salicylic acid shall be used, and that if benzoate of soda is used it must not be more than one-tenth of one per cent, and the label or other markings on the container shall state the amount. All products offered for sale in Tennessee must contain a label, and if any coloring is used it must be stated on the label. The label, in addition, must state the net weight. In speaking of the matter, the commissioner said: "I take this occasion to warn them as well as the merchant purchasing same and reselling to his patrons that we will be compelled to prosecute all parties concerned, under the laws of this state. Our reasons for this are manifold. We find that in a large number of cases goods are being adulterated, and that short weight is being given, and that there can be no check made upon the matter as long as containers do not carry labels of any description. Merchants will be warned that hereafter, should inspectors of this department find goods of any character on their shelves such as suggested above, they shall immediately condemn and prosecute the offenders as violating the sanitary food law of this state."

* * *

¶ A hearing on the question whether single hams and single sides of bacon which are wrapped or covered with paper, cloth, or gelatin are in "package form" will be held in the Bureau of Chemistry, 216 Thirteenth Street, S. W., Washington, D. C., at 2 p. m., March 8, 1916. The net weight amendment to the Federal Food and Drugs Act provides that an article of food in package form shall be considered misbranded within the meaning of the act if the quantity of the contents be not plainly marked on the outside of the package. The Department of Agriculture has already expressed the opinion that hams and single sides of bacon covered, as is customary in the trade, with paper, cloth, or gelatin are not "in package form" within the meaning of the amendment. This opinion has been published as information 17 in Service and Regulatory Announcements, Chemistry 6, issued July 17, 1914. It was also embodied in a circular letter from the Bureau of Animal Industry, dated September 1, 1914, issued for the guidance of inspectors at packing establishments throughout the country. Recently the department has received requests for a reconsideration of this question, and a public oral hearing on the matter has been set for March 8. All interested in the subject are invited to attend the hearing and make such representations as they desire. Those who are unable to attend in person may submit their views in writing. Such communications should be addressed to the Chief of the Bureau of Chemistry, United States Department of Agriculture, Washington, D. C.

¶ Following a conference with representatives of the Board of Health of New York and of the State Health Department, John J. Dillon, commissioner of foods and markets, at No. 202 Franklin street, announced recently that steps will at once be taken to force dealers in cold storage butter and eggs to mark them as such before offering them for sale. A force of eighty-seven inspectors of the Board of Health and five of the Department of Foods and Markets has been set at work to see that the cold storage law of the state is rigidly enforced. According to Commissioner Dillon, violations of the cold storage law cannot be carried out without the knowledge of the candlers, packers, salesmen and distributing forces of the jobbing houses in the trade. In any investigation of the distribution of cold storage eggs made by the department candlers, packers, salesmen and agents of distribution will be subpoenaed to give testimony under oath in regard to the disposition of foods in cold storage. "Under the authority of the statute of the state," said Commissioner Dillon last night, "I have issued an order directing that wholesalers and jobbers bill out cold storage eggs to customers plainly marked on the invoices 'cold storage eggs' and that all cartons containing eggs be plainly marked on the outside 'cold storage eggs.' Under the same authority retailers are directed to demand of their supply houses invoices plainly marked and housewives are requested to demand receipts from retailers plainly marked with 'cold storage' or 'fresh eggs,' as the purchase may warrant." Commissioner Dillon said further that the present wholesale price of cold storage eggs does not justify a retail price in excess of thirty cents a dozen for the best quality of cold storage eggs. Yet they are frequently sold for fresh eggs at more than twice that sum. Evidences of violation, according to Commissioner Dillon, will be collected and if the evidence justifies it prosecutions will follow.

OFFICE OF THE SECRETARY.

WASHINGTON, D. C.

FOOD INSPECTION DECISION 159.

CERTIFICATION OF MIXTURES CONTAINING COAL-TAR COLORS.
(AMENDING FOOD INSPECTION DECISIONS 77, 106 AND 129.)

Hereafter, no mixture containing one or more certified coal-tar dyes, in combination with other components, constituents, or ingredients not coal-tar dyes, will be certified unless the manufacturer shall make and deposit with the Secretary of Agriculture a declaration that each and every package in which any of such mixture shall be sold or offered for sale shall have, plainly and conspicuously declared upon the label or container, a statement of the quantity or proportion of the certified dye or dyes present in the mixture.

Food Inspection Decisions 77, 106 and 129 are amended accordingly.

D. F. HOUSTON,
Secretary of Agriculture.

Washington, D. C., December 28, 1915.

Issued January 6, 1916.

FOOD INSPECTION DECISION 160.

GLUTEN PRODUCTS AND "DIABETIC" FOOD.

The following definitions and standards for gluten products and "diabetic" food were adopted by the Joint Committee on Definitions and Standards April 9, 1915, and were approved by the Association of American Dairy, Food and Drug Officials August 3, 1915, and by the Association of Official Agricultural Chemists November 17, 1915:

Ground gluten is the clean, sound product made from wheat flour by the almost complete removal of starch and contains not more than ten per cent (10%) of moisture, and, calculated on the water-free basis, not less than fourteen and two-tenths per cent (14.2%) of nitrogen, not more than fifteen per cent (15%) of nitrogen-free extract (using the protein factor 5.7), and not more than five and five-tenths per cent (5.5%) of starch (as determined by the diastase method).

Gluten flour is the clean, sound product made from wheat

flour by the removal of a large part of the starch and contains not more than ten per cent (10%) of moisture, and, calculated on the water-free basis, not less than seven and one-tenth per cent (7.1%) of nitrogen, not more than fifty-six per cent (56%) of nitrogen-free extract (using the protein factor 5.7), and not more than forty-four per cent (44%) of starch (as determined by the diastase method).

Gluten flour, self-raising, is a gluten flour containing not more than ten per cent (10%) of moisture, and leavening agents with or without salt.

"Diabetic" Food. Although most foods may be suitable under certain conditions for the use of persons suffering from diabetes, the term "diabetic" as applied to food indicates a considerable lessening of the carbohydrates found in ordinary products of the same class, and this belief is fostered by many manufacturers on their labels and in their advertising literature.

A "diabetic" food contains not more than half as much glycogenic carbohydrates as the normal food of the same class. Any statement on the label which gives the impression that any single food in unlimited quantity is suitable for the diabetic patient is false and misleading.

The foregoing definitions and standards are adopted as a guide for the officials of this department in enforcing the Food and Drugs Act.

D. F. HOUSTON,
Secretary of Agriculture.

Washington, D. C., January 3, 1916.

Issued January 6, 1916.

FOOD INSPECTION DECISION 161.

MAPLE PRODUCTS.

The following definitions and standards for maple products were adopted by the Joint Committee on Definitions and Standards June 4, 1915, and were approved by the Association of American Dairy, Food and Drug Officials August 3, 1915, and by the Association of Official Agricultural Chemists November 17, 1915:

Maple sugar, maple concrete, is the solid product resulting from the evaporation of maple sap or maple sirup.

Maple sirup is sirup made by the evaporation of maple sap or by the solution of maple concrete, and contains not more than thirty-five per cent (35%) of water and weighs not less than eleven (11) pounds to the gallon (231 cu. in.).

The foregoing definitions and standards are adopted as a guide for the officials of this department in enforcing the Food and Drugs Act.

D. F. HOUSTON,
Secretary of Agriculture.

Washington, D. C., January 3, 1916.

Issued January 6, 1916.

FOOD INSPECTION DECISION 162.

EGG NOODLES AND PLAIN NOODLES.

The following definitions and standards for egg noodles and plain noodles were adopted by the Joint Committee on Definitions and Standards June 4, 1915, and were approved by the Association of American Dairy, Food and Drug Officials August 3, 1915, and by the Association of Official Agricultural Chemists November 17, 1915:

Noodles, egg noodles, are dried alimentary pastes made from wheat flour and egg. They contain not less than five per cent (5%) by weight of the solids of whole, sound egg exclusive of the shell.

Plain noodles, water noodles, are dried alimentary pastes made from wheat flour without egg, or with less than five per cent (5%) by weight of the solids of whole, sound egg exclusive of the shell.

Standards for moisture in these products are under consideration.

The foregoing definitions and standards are adopted as a guide for the officials of this department in enforcing the Food and Drugs Act.

D. F. HOUSTON, Secretary of Agriculture.

Washington, D. C., January 3, 1916.

Issued January 17, 1916.

FOOD INSPECTION DECISION 163.

AMENDING REGULATION 29, WHICH RELATES TO MARKING THE QUANTITY OF FOOD IN PACKAGE FORM.

Regulation 29 of the Rules and Regulations for the Enforcement of the Food and Drugs Act is hereby amended by striking out paragraphs (d) and (e), and substituting therefor the following:

(d) If the quantity of the contents be stated by weight or measure, it shall be marked in terms of the largest unit contained in the package, except that, in the case of an article with respect to which there exists a definite trade custom for marking the quantity of the article in terms of fractional parts of larger units, it may be so marked in accordance with the custom. Common fractions shall be reduced to their lowest terms; decimal fractions shall be preceded by zero and shall be carried out to not more than two places.

(e) Statements of weight shall be in terms of avoirdupois pounds and ounces; statements of liquid measure shall be in terms of the United States gallon of 231 cubic inches and its customary subdivisions, i. e., in gallons, quarts, pints, or fluid ounces, and shall express the volume of the liquid at 68° F. (20° C.); and statements of dry measure shall be in terms of the United States standard bushel of 2,150.42 cubic inches and its customary subdivisions, i. e., in bushels, pecks, quarts, or pints: Provided, That statements of quantity may be in terms of metric weight or measure. Statements of metric weight should be in terms of kilograms or grams. Statements of metric measure should be in terms of liters or centiliters. Other terms of metric weight or measures may be used if it appears that a definite trade custom exists for marking articles with such other terms and the articles are marked in accordance with the custom.

W. G. McADOO,
Secretary of the Treasury.
D. F. HOUSTON,
Secretary of Agriculture.
WILLIAM C. REDFIELD,
Secretary of Commerce.

Washington, D. C., January 5, 1916.

Issued January 17, 1916.

FOOD INSPECTION DECISION 164.

COLORS IN FOOD.

(Amendment to Food Inspection Decisions 76, 117 and 129.)

Food Inspection Decision 76 is hereby amended by striking out of the list of permitted dyes contained therein, the words:

Yellow shade:

4. Naphthol yellow S.

and substituting therefor the words:

Yellow shades:

4. Naphthol yellow S.

94. Tartrazine.

Food Inspection Decisions 117 and 129 are also amended so that, hereafter, the coal-tar dyes which may be used in food, subject to the provisions of Food Inspection Decisions 76, 117 and 129, shall be the following:

Red shades:

107. Amaranth.

56. Ponceau 3 R.

517. Erythrosine.

Orange shade:

85. Orange I.

Yellow shades:

4. Naphthol yellow S.

94. Tartrazine.

Green shade:

435. Light green S. F. yellowish.

Blue shade:

692. Indigo disulfoacid.

W. G. McADOO,
Secretary of the Treasury.
D. F. HOUSTON,
Secretary of Agriculture.
WILLIAM C. REDFIELD,
Secretary of Commerce.

Washington, D. C., January 11, 1916.

THE WHOLESALE GROCERY FIELD

ALL THE MANUFACTURING AND JOBBING NEWS WORTH PRINTING

CANNED FOODS MARKET.

By Canticle.

THE month of January, 1916, has been a poor month for the distribution of canned foods—it always is. The stock taking and figuring and the analysis of the year's business always takes until about the tenth of January to finish. The buyer is busy pricing up his inventory and afterward in making up a list of his overstock and putting it to moving. Instructions usually come from the financial department to "cut out buying" until the books are closed and buying is frequently entirely discontinued until about January 15th and this was the case this year 1916.

Toward the latter part of the month there were a few days of warm and good shipping weather, but until the last week almost of January the temperature was too low to make it safe to ship canned foods in Chicago and in many other parts of the country.

Altogether for distribution of spot goods in the canned food line the past month can be written down as a poor month.

The buying was encouraged, however, toward the last of the month by a few days of good, open shipping weather and several blocks of spot canned tomatoes held by canners and commission men in Chicago warehouses changed hands at prices ranging from 82½ to 87½ for twos and \$1.05 to \$1.10 for threes standard, labeled goods, and there were rumors of some trading in standard canned corn.

On the contrary canned foods for future delivery of the 1916 pack have found the attention of buyers and there has been some good, lively and heavy buying on future contracts during the month, much greater in volume and importance than the buying of futures during January, 1915.

Canned Tomatoes.—This article for spot or immediate delivery was entirely neglected during January until about the 20th of the month, when the Chicago wholesale grocers began to annex all the good cheap lots of twos and threes that were held in warehouse in that city and brokers throughout the country began to wire orders to the East. New York City wholesale grocers likewise began to pick up desirable lots wherever to be found at a shade under the market and the aggregate purchasing was very heavy. It was sufficient instead to reduce stocks held in Baltimore in a speculative way to almost nothing and to set canners buying from each other at \$1.05 to \$1.10 Baltimore for threes standard tomatoes. That market now is quotable strong at \$1.10 f. o. b. warehouse there, while twos spot are held firmly at 82½ to 85c, same delivery.

Indiana has practically sold all her tomatoes except a few extra standard threes in open top cans which owners hold at \$1.10, f. o. b. Indiana cannery. These will soon be absorbed, however, as the price is below the general market.

As anticipated, future canned tomatoes of the 1916 packing on contract have sold freely all during the last half of January and the purchases are said to have been far larger and more general among wholesale grocers than last year and in fact for many years.

The price made by canners for futures was low and wholesalers have swung into line heavily. Maryland and Delaware named 80c for standard threes and 60c for standard twos, 1916 pack, and even Baltimore city canners have sold at that

price, chiefly for the products of country canneries which they conduct and own but taking the Baltimore freight rate.

Indiana has named a price for standard tomatoes, 1916 pack, of 85c for threes and 65c for twos and has sold futures heavily at that price, so it is learned. Offers at 80 and 60 made to Indiana canners were turned down flat, so I have heard. Extra standard threes Indiana, 1916 pack, are held at 90 to 95 cents.

The Ohio price on future tomatoes is reported to be the same as that of Indiana canners.

Canned Corn.—The movement of spot canned corn for January was very light and no buying of importance was heard of.

If the spring trade is not absolutely disappointing and that contingency is not likely, there will be a good, healthy movement and strong advance in the price of canned corn, as the supply in first hands of desirable qualities is very small and wholesale grocers are by no means well supplied or overstocked.

The experts regard the spot canned corn prospect as excellent and a buying movement is anticipated during February. It is said that an explanation of the statistical situation of spot canned corn which will probably be made at the annual national convention of canners February 7 to 11, 1916, to be held at Louisville, Ky., is likely to prove a surprise and to be sensational.

Purchases of futures in canned corn have been so far confined almost altogether to contracts for well known packs and kinds that wholesale grocers regularly use under their private labels. It is understood that Illinois canners have named prices for 1916 pack of canned corn and that the price f. o. b. cannery is for standard No. 2 corn, per dozen, 65c; extra standard 67½c, and for fancy 80c.

Canned Peas.—There is some visible improvement in the price of canned peas, spot goods, and some buying at slightly higher prices than prevailed at the close of the year. Cheap grades at very low prices are scarce, but medium grades, also at low prices, quality considered, are in better supply. The finer grades of peas do not at present seem to be in request to any usual extent.

Canned Salmon.—No active trade for canned salmon may be expected before about April 1st and prices are likely to drag until then.

Pink salmon for No. 1 talls seems to be in some demand for export and the price fluctuates on the Pacific Coast from 65c to 75c per dozen as to brand and quality and locality.

National Convention.—The canners of the United States, or The National Canners' Association, will hold a ninth annual convention at Louisville, Ky., February 7 to 11, and the Canners' Supply Association and National Dried Fruit and Canned Brokers' Association will hold their annual conventions, as usual, conjointly with the canners.

These conventions are always largely attended as the three organizations combined attract strongly by their proceedings and the big machinery exhibit which is always a part of the conventions' many attractive features, in itself brings canners from all parts of the world.

Selling Brokers Get Theirs.—For many years the factorage or commission system of controlling the canners of canned tomatoes, or many of them, through the use of cash and

credit by factors or commission men to control undercapitalized canneries, has been in vogue, especially in the Eastern states.

These factors though they charged the small canners five per cent commission for selling and collecting for the canners' output and having bought their corn labels and cases for them secured a profit or commission on them, and also charged the canners a good, stiff rate of interest for money advanced to them, have persistently refused to pay the selling brokers who came into contact with the buyers and secured their business, more than one per cent brokerage, a starvation wage.

They have found that brokers will not work for that percentage and that they have been making such determined and persistent efforts to sell goods direct for canneries that would pay them full two per cent brokerage, that they, the factors, would have to get out and travel and hustle up their own business if they got any. That was too expensive a procedure and besides by the time the factor got there the selling broker would have induced the buyer to enter into a contract with some good canner direct. Then the factor was unacquainted and did not know who the buyer was or what his hours were or where his desk was, or what kind of a son-of-a-gun to do business with he was, or how to get to his place of business or street number. All these things the local broker knew and also knew what the buyer's first name was and was expected by the buyer to use it in conversing with him.

"Hunc Illae Lacrymal" as the Latin poet wrote it, or hence these tears, for the factors have concluded to rob themselves by allowing the selling brokers 1½ per cent on tomatoes and 1½ and 2 per cent on corn.

But the reformation comes late—most too late—for the local brokers have most generally hitched up with a line of good canneries and are selling goods direct. The factor in canned foods is passing. "Peace to his ashes."

DRIED FRUIT MARKET.

BY VERITAS.

Business so far during the month of January on dried fruits is quite a little above normal. There is a good demand for all varieties. Purchasing of futures by the trade generally last year was below normal. This is without doubt responsible for the increased spot business.

Prunes.—Stocks are not heavy so far as Coast holdings are concerned, and there is little or no pressure on the part of packers to sell. There is no shading in price whatsoever. Some sizes are very scarce. Nearly the entire holdings on the Coast today are confined to 40/50s, 50/60s and 60/70s; 70/80s are probably the scarcest of all sizes; 80/90s and 90/100s are in very light supply. The basic price on 70s and smaller is from ¼ to ½c above that for 40s, 50s and 60s. It is only a question of a short time when sizes smaller than 60s will be unobtainable. There is every reason to believe that the prune market is going to materially advance long before new crop is available. Statistically the situation is very strong. The trade generally seem to realize this and are anticipating requirements.

Peaches.—The market is quiet at the advanced price, as there is very little new business going on. It is reported, however, that jobbers are enjoying a very good peach business and they without doubt will be obliged to turn to the Coast for supplies in the near future. The carry-over of peaches is about normal. Values are still on a low level and, with the big spring consumption that we always have on this item, there is every likelihood of a strengthening in value.

Apricots.—Stocks are well concentrated and light. Very few packers have cots to offer and growers are entirely cleaned up. This is a big spring fruit and no doubt, when the demand is on, values will strengthen.

Raisins.—The market is in very good shape. Seedless varieties are practically unobtainable with the exception of limited quantities of One-Crown Floated Muscatels in connection with loose and seeded.

With only an average volume of business from now on, we should see a decided stiffening in values on all varieties of fruit because of the comparatively light stocks.

CHICAGO SALT FISH MARKET.

On account of the great scarcity of genuine Holland herring, almost every wholesale grocery house in Chicago, as well as all importers, have been packing Yarmouth herring in whitehoop kegs. During the last few weeks, there has been some 20,000 of these kegs come to this market.

The Yarmouth Matties and Matfulls, as well as other qualities of herring, have been culled, sorting out the roe herring from the milkers, and packed in kegs, half barrels and barrels, as mixed and milker herring.

Yarmouth herring are caught in the North Sea. Holland herring are also caught in the North Sea. The boats from Yarmouth and the boats from Holland fish side by side, figuratively speaking. One vessel returns to Yarmouth, the other to Holland. The Holland fisherman packs his herring in the whitehoop package. The Yarmouth fisherman puts his fish in a hard wood barrel. The herring are one and the same in both cases, but the commercial name, is really the only difference.

War conditions, have prevented the exportations of the so-called Holland herring. The Yarmouth herring have been available in limited quantities in this market, and have been quoted at various prices, but the prices that seem to get the business, are about as follows:

For SUPERIOR kegs mixed \$1.00, all milkers, \$1.10.

For SUPERIOR barrels mixed \$17.00, all milkers, \$20.00.

For SUPERIOR half barrels mixed \$9.00, all milkers, \$10.50.

There has been a very active trade during the last few weeks on this item, and it looks as though this will be the item that will be used most extensively in the next few months.

Lent does not begin until the 8th of March; that means, rather a late fish business.

Salt Mackerel. This item has been moving rather slowly; in fact, it always does during January, but during February and March, there should be quite a little activity in the item of salt mackerel. Prices are well sustained, and the larger sizes seem to be plentiful, while the smaller sizes such as the No. 3's, 4's and 5's, are really scarce. There probably are not more than a few hundred barrels, if all could be taken together to be offered in the United States today. Price on the Norwegian mackerel is very high indeed. We have heard of sales made during the last few days at \$26 for Norway 3's, and \$24 for Norway 4's, in this market, although in a very limited way, however. Irish Mackerel are pretty nearly as high as the Norways. A good autumn caught No. 3 is bringing about \$23, and No. 4's about \$21, Chicago.

The quality of the Cape Breton Bloaters or No. 1 Mackerel, this year has been exceedingly fine, the fish being very heavy, very fat, white, sweet and juicy and rather large in size. Dealers who have a heavy trade on small sizes, should cover immediately, as within the next thirty days, they will be practically off the market. The larger size are not popular as a rule, still this year, they should sell well, and we believe they will.

There has been great activity in this market as well as in the eastern markets on Newfoundland herring this year, owing to the high price on the so-called sloe herring or melt and roe herring that comes from Norway about this time. Norwegian sloe herring would cost between \$15 and \$16 to lay in the Chicago market, while the other herring which are practically as good, can be sold readily at \$10 per barrel. They are curing them Norwegian and Scotch style.

Scotch herring have been moving rather slowly and the market has been more or less depressed. There is really no good reason for this, except that New York buyers seem to be loaded with these goods and are holding the market down.

People who expected to see a high price on these goods, apparently, are being disappointed.

Of course the catch of Yarmouth herring has been over for some time, but there seems to be enough to go around.

Boneless herring in 10-pound boxes, on this item, the price has been dragging also, and they are cheaper at the present time than they have been for a number of years. Smoked Bloaters, on the contrary, which are made from Newfoundland herring, are much higher this year than usual. This is due to the fact, that herring are costing so much more and are running larger in size. In former years it was easy to get 5 boxes out of a barrel; this year they are getting but 4. Hence the high price.

Finnan Haddies, the demand has been good on these.

There has been very little activity to date on lake fish. However, conditions are reported good all along the line, and it looks as though there will be a pretty good Lenten trade.

The item of Norwegian sardines furnishes one of the most interesting topics at this time. The spring catch will soon be on in Norway, but everything indicates to high prices. The summer pack are now pretty well exhausted, and there are but very few to be had at any price. The price on this item runs all the way from \$9.50 to \$11.50, according to the popularity of the brand. The better known brands which have an established demand are bringing the latter price, while goods of equal quality that are not quite as well established in this market are bringing about \$9.50. There are practically no cheap Norwegian sardines to be had.

Barrel salmon is high and with an upward tendency to the market on canned salmon.

Split herring have been much higher this year, in sympathy with other kinds of herring, and at the present time are ruling from \$6.00 to \$6.25 according to the quality. Really the buyer who pays the \$6.25 price gets a better piece of goods than if he bought at \$6.00. Even if he does not get it in the quality he gets it in the weight, as most of the Canadian packages only contain 180 to 190 pounds. The \$6.25 variety are guaranteed 200 pounds, and therefore represent the best value.

Iceland herring are moving very slowly. There are still some considerable many of these in this market, and we think there will be a decline in price during the next thirty days.

It seems as though the wholesale grocery trade are drifting more and more each year to original packages of fish. In other words, they are doing more repacking, and this is as it should be, as the big profit in the fish is in the repacking. For instance, a barrel of mackerel ordinarily would sell to the trade at \$20.00, can be repacked profitably and show a much greater profit when put in small packages, and as a matter of fact, most of the mackerel are sold in pails, tubs and half barrels. The style of cooperage that has been used more generally this year in the packing of mackerel has proved highly satisfactory, that is the hardwood barrels with the iron hoops. These barrels are almost as good as the stock yard pork barrels, and will stand shipment practically around the world without leakage. Anything that tends to keep the fish in better condition is certainly an improvement in the fish business. We believe that in the next few years there will be very few, if any, of the old style packages used, that is, with the wooden hoops and soft wood staves.

On the item of Scotch herring, comprising such fish as the selected Large Fulls, Fulls together with Matjes Herring, the market seems to be somewhat firmer. In England at the present time they are getting their regular winter run of herring, but the catch will be light and the prices are very much higher than usual. For instance, these winter herring that ordinarily could be bought in Liverpool for \$6.00 or \$7.00 a barrel, are now bringing in the neighborhood of \$15.00. The quality, however, is not fair. People who have a trade for this class of goods should insist on getting the early catch, of which we understand there are fair stocks now held in New York and in Chicago.

Taking it all in all, the prospects look all right for a good Lenten trade.

DAVID H. LANE COMPANY.

MONTHLY SPICE LETTER.

The market is exceedingly active—large trading on cassias and gingers. Ocean freights have again advanced to figures hitherto unknown. These changes will add very much to the cost of goods purchased for later delivery. Great scarcity continues throughout the list and higher prices may be expected.

Pepper.—Slowly advancing, due now to higher freights. The demand is unusual and the uncertainty of the government officials pertaining to arrivals and the passing of same is causing considerable uneasiness. The delay is costly to the importer and naturally has to be shared by the manufacturer and ultimately by the consumer.

Red Peppers.—Japans are slightly easier on account of fresh arrivals. Other grades continue scarce and firm in price.

Cloves.—Prices continue steady. The demand is usually good and prices are likely to remain firm.

Pimento (Allspice).—Steady and in fair demand. Prices unchanged during the week.

Mace.—Very scarce at present, and we are likely to see sharp advances, due more or less to lack of supplies.

Nutmegs.—Very scarce and in good demand. The government has lately held up several parcels of grinding grades. The attitude of the government officials means a great loss and delay to the trade.

Cassias.—In better demand. Supplies here are unusually small. Spot stocks have lately been greatly decreased and very much higher prices are bound to result.

Gingers.—Very much firmer, with little chance of any relief before late spring. Higher spot prices are therefore very probable.

Tapiocas.—Very firm and have advanced during the week. This article has been affected by the higher freights.

Paprika.—Keeps firm in price and the demand is steady. There has been considerable delay in arrival of lots from Spain and the market is really bare of stock at present.

Seeds, Herbs, Etc.—Many articles are unusually scarce. The consumption over the next three months should be unusually large and some articles are likely to be entirely out of stock before new crop goods can arrive during late summer and early autumn. Caraway is firm. Poppy has advanced. Cummin is firm. Sweet herbs are in fair demand at unchanged prices.

McCORMICK & Co.

NO MERGER OF SOUP CONCERNS.

Considerable excitement was caused in food circles of this city, last week, when it was whispered on good authority, that the Joseph Campbell Co. of Camden, had purchased the controlling interest in the Franco-American Food Co. of Jersey City. Careful inquiry by your correspondent, however, discloses denials from all parties.

"What evidently started these rumors," said President Biardot of the Franco-American Company, "is the fact that A. C. Dorrance, a brother of the president of the Joseph Campbell Company, has purchased a small interest with us. Mr. Dorrance had previously severed his connection with the Joseph Campbell Company and is now our purchasing agent and one of my assistants in the manufacturing department.

SPECIALTY MEN'S OFFICERS.

The annual meeting of the New York Auxiliary of the American Specialty Manufacturers' Association was held a few days ago when the following officers were elected for the year 1916:

President, A. R. Rodway (representing United Cereal Mills, Ltd.; Purity Oats Company, Towle Maple Products Company, Walter M. Lowney Company, the Ekenberg Co., Burt Olney Canning Co.)

Vice president, J. P. Davenport (Libby, McNeill & Libby), and E. W. Murphy (Kellogg Toasted Corn Flake Co.)

Secretary, F. H. Higby (Welch Grape Juice Company); treasurer, B. F. Amos (John Wildi Evaporated Milk Co.).



Gleanings from the World of Foods



A MARKED increase in the demand for Hawaiian-grown bananas along the Pacific coast and as far east as Chicago has awakened a new industry, in which growers in the islands are reaping a substantial profit. W. A. Anderson, now representing the territorial marketing division on the mainland, reports one dealer alone has agreed to handle hundreds of bunches of the fruit on the arrival of each steamer from Honolulu. It is estimated that growers may net 70 cents a bunch. The Matson steamers *Lurline* and *Manoa* are said to be especially equipped to handle large consignments of bananas between the islands and the coast. The Bluefields banana is now one of the most successfully grown varieties in the islands.

* * *

¶ Articles of incorporation were filed recently for the Horlick Food Company. The new concern will manufacture and sell malted food products and other health food products. It is capitalized at \$10,000. Its incorporators are William Horlick, Jr., William P. Marr and Louis Mickelsen. It will be conducted in conjunction with the other Horlick enterprises, and the offices of the new concern will be in the town of Mount Pleasant, at the main offices of the Horlick Malted Milk Company.

* * *

¶ The officials of the Waukegan, Ill., Terminal have given out the information that the Alfalfa Products Company of Minneapolis have contracted for 12,000 square feet of space in the building just west of and adjoining the power plant at the terminal. The company make several food products of alfalfa and one of the principal articles will be a table syrup. This they will begin making as soon as they get their machinery installed. They also make some cereal or foods and a very fine fountain drink. About sixty men will be employed at the beginning and when the plant is in full operation all told there will probably be a couple hundred or more in the establishment.

* * *

¶ The brick-tea industry had its origin in Foochow in the early seventies. The trade prospered rapidly, and three factories equipped with British machinery were in full operation within a few years. In 1875 the customs figures show that 6,200,000 pounds of brick tea were shipped from the port, while in 1879, four years later, the extraordinary figure of 13,700,000 pounds in export shipments was reached. The trade prospered with varying success until 1891, following which there was a gradual decline. This was chiefly due, no doubt, to the transfer, for economical reasons, of the Russian tea market to the Yangtze river tea marts in the neighborhood of Kiukiang and Hankow. The trade soon languished and all three foreign factories were obliged to close. In 1910 a Chinese company called the Chee Woo Brick Tea Company, was organized with a capital of \$150,000. The company purchased the building and machinery of one of the brick tea factories closed some years previously. The company has two brick tea presses in operation during the season, and its output during the last year totaled 1,600,000 pounds, valued at \$215,000. Practically all this product was pressed from the dust, only 2,000 pounds of the whole leaf being manufactured into the brick form. The tea bricks are packed in bamboo baskets, each basket containing 80 bricks. A brick of tea dust weighs 40 ounces, the cost of manufacture being 32 cents. A brick of leaf tea weighs 36 ounces and costs to manufacture 48 cents, inclusive of freight to Shanghai, the distributing center for the product. The factory employs 200 workmen, engaged in day and night shifts, with a daily production of 8,000 bricks. The wages of the workmen, inclusive of board, ranges from 15 to 50 cents per day. The factory starts operations as soon as the orders total 160,000 bricks. The tea dust used in the manufacture of the brick costs \$7 to \$16.80 per picul of 133½ pounds.

¶ Before the outbreak of war the flour mills in Japan had been in a very difficult position through carrying heavy stocks, and conference prices could hardly be maintained. Hundreds of thousands of bags of American flour congested the market without finding sales. Since the outbreak of the war a large demand for flour has arisen, and the market has advanced rapidly. All the stocks of the American flour were soon re-exported, and all the orders which came in subsequently have been and are still being executed with flour milled in Japan of Japanese wheat. This has resulted in a remarkable rise in wheat, which is quoted at over 16 yen per koku (\$1.59 per bushel), or 1.50 yen per koku (15 cents per bushel) higher than rice. This is unprecedented in Japan. Export of flour still continues active. The Mainichi (Osaka) notes that the flour so far sold for export was sold at about \$1.35 per bag. This paid the flour mills, as it represented flour milled from wheat purchased at a much lower price than this. Orders can no longer be accepted at so low a price, owing to the advance of wheat, and it is disturbing further transactions. But the supply of food can not be dispensed with, and buyers have no alternative but to pay a higher price. The Japanese flour mills, which had been in a bad way for some years, are enjoying unwonted prosperity.

* * *

¶ During the eight months January to August, 1915, there were shipped from Belize 40,649 pounds of copra to the United States and over 100,000 pounds to England, or more than the total shipments for as many previous years. The meat of small cocoanuts, nuts broken in handling, and nuts that have sprouted can be profitably used in preparing copra, and unless the local market price of first class nuts exceeds \$14 per thousand such nuts can be used as well. Copra is worth 4 and 5 cents in this market. A thousand nuts should yield 400 pounds of copra, but the fancy prices that have been paid for cocoanuts during the past six years forbade consideration of making the article; as high as \$30 per 1,000 has been paid for cocoanuts in Belize. The manufacture of copra is not expensive in this colony, the meat extracted from the nut being dried in the sun in five or six days, or under cover in the rainy season. The copra is then ready for sacking and shipment. The oil, if at all tainted, can be profitably used in soap manufacture. First-grade oil is used in making a cheap but wholesome grade of butter, which is now used extensively in Europe. Cocoanuts are being extensively planted in this country. It is a very profitable industry, even when the nuts sell at \$12 per thousand. Copra manufacture is, however, a new venture, but one that will probably succeed and increase. No attention was paid to it until this year. The immediate, even though slight, effect on American trade will be the demand for bags and bagging.

* * *

¶ The results of the first two trips of the auxiliary schooner *Stranger*, landing tilefish at New York City, give evidence that the campaign of the United States Bureau of Fisheries to introduce that fish is a complete success. In the beginning some of the dealers expressed doubt whether the public would accept the fish in sufficient quantities to warrant the establishment of a regular fishery. However, the publicity campaign of the bureau has been effective and the fish are in demand with both dealers and public. The first fare of 10,000 pounds reached New York late on October 11, and was put on the market early the next morning. Although the start was slow, the demand increased rapidly and by 3 o'clock the market was cleaned out, with orders unfilled. The second trip of 12,000 pounds docked on the morning of October 27 and despite the competition of an unusual amount of both cheap and fancy fish in the market the tilefish were taken by the dealers as fast as unloaded. All reports from those that have eaten the fish are good, and the dealers agree that a permanent demand is established. The *Stranger* is now on its third trip, this time with a camera man from one of the

motion-picture companies along, so that pictures of the fish and fishing operations will soon be shown throughout the country. The Bureau of Fisheries states that unless there should be a complete reversal of the results of fishing during the next two trips, it will be under no expense for fishing operations, and the fishermen will receive considerably more than what they regard as a reasonable return for their labor.

* * *

¶ Samuel E. Lux, with two business men from Lyndon, Kan., will reorganize his commission business in Topeka and make of it a wholesale grocery and commission business with a capital stock of \$100,000, according to Mr. Lux's statement. A two-story addition will be built at the south side of his present building to accommodate the enlarged business, Mr. Lux said. A. H. Wilson and O. J. Fleming of Lyndon, both connected with the Ottawa Wholesale Grocery Company, will associate themselves with the new firm. Mr. Lux will be the president of the company and the other two men will occupy the offices of secretary and treasurer. The details of the plan have not been thoroughly gone over, Mr. Lux said, and he could not state when the new house will open for business. It is probable, however, that arrangements will move rapidly and representatives of the company will be on the road early in the spring. Mr. Lux intimated that it would be some time before he could give the details of the firm's plans. Mr. Lux's present commission business will be carried on the same as at present and he will direct it, while one of the new men will have charge of the wholesale grocery end. There is a fifty-foot vacancy on the south side of the buildings occupied by the Lux Commission Company, at 210 Kansas avenue, and in this space will be erected the building that is to be occupied by the grocery business. As far as the details have progressed it is planned to put up a two-story building, but later it may be decided to make the present three numbers and the two new ones into a three-story building. Mr. Lux has been in the commission business in Topeka for many years and has made a success of it. His firm is well known in the field served by the Topeka commission houses.

* * *

¶ The prune industry of Washington bids fair to attain a place of prominence in horticulture in this state. Clark county, in the southwestern part, leads in production, while Yakima, in the middle south section, and Chelan, on the Pacific coast, are close seconds. Of the several varieties produced the Italian seems to be most popular. It has been planted in greater quantities, and none of the other varieties has proved equal in size of tree, productiveness, size and quality of fruit. The French variety has been experimented with extensively for the past 20 years. While the tree is vigorous and productive, still, on account of the size of the fruit and the disfavor in the market, it is less popular than the Italian variety. The sugar-plum variety has been planted in several orchards. The tree bears young and is quite productive, but does not dry readily. The blossoms, leaves and fruit of the prune are frost tender and only resist injury by especially favorable conditions. There have been several crop failures during the past two or three years, due mainly to unfavorable weather at the spring blossoming. Plum and prune planting in Washington aggregated 50,387 trees in the spring and 48,983 trees in the fall of 1913, also 51,381 trees in the spring of 1914. The following are the counties in the state showing commercial production of prunes during 1913: Benton, 3 cars; Chelan, 35 cars; Clark, 115 cars; Douglas, 2 cars; Ferry, 3 cars; Klickitat, 18 cars; Lincoln, 5 cars; Pierce, 1 car; Spokane, 22 cars; Stevens, 11 cars; Walla Walla, 145 cars and Whitman, 25 cars. Total, 385 cars. The approximate commercial prune shipments for the season of 1913 in standard packages were 385,000 boxes, which at 50 cents amounted to \$192,500. Dried prunes for the same season (Lincoln, Whatcom, Clark, Whitman, and Walla Walla counties), amounted to 5,187,550 pounds, which at 7 cents brought \$363,128. Further information regarding the prune and plum culture in the State of Washington may be obtained by communicating with some of the fruit protective associations, whose addresses are forwarded and may

be had from the Bureau of Foreign and Domestic Commerce and its branches.

* * *

¶ A number of Russian dealers in fish products have received a circular letter from American caviar dealers which states that Russian caviar of the spring catch of 1914, purchased for the American market, has remained unsold owing to the high prices that had to be paid for it in Russia; that, in addition the American sturgeon catch last year was very abundant; and that the United States has, therefore, more than a year's supply of caviar. The circular continues, in substance, as follows: The European trade in Russian caviar has practically stopped, and it is expected that a considerable part of the caviar produced in 1914, which is usually exported to western Europe, will be added to the American supply. The importance of the loss of the continental markets has become evident now, when caviar of white sturgeon fetches only 50 rubles per pood (\$0.71 per pound), whereas in 1913 it was sold at 260 rubles per pood (\$3.71 per pound). American caviar dealers consider it advisable for caviar production in Russia to be discontinued in 1915, or at least limited, so far as possible, to the domestic market. Russian producers, however, are of the opinion that the American view of the situation is based on data relating to the first weeks after the declaration of war. Since then the market has shown a constant improvement and the present situation is not unsatisfactory. A brisk trade was noted during January and the Astrakhan dealers disposed of a considerable part of their supplies.

* * *

¶ Our insular territory of Hawaii, with an area of only 6,449 square miles, and an estimated population in 1914 of 207,743, has increased its trade with the United States and foreign countries from \$40,000,000 in 1904 to approximately \$76,600,000 in 1914, making its per capita commerce \$369. The trade of Hawaii has rapidly increased in the period since the annexation of that territory to the United States in 1898. Shipments thereto from this country, according to official figures published by the Bureau of Foreign and Domestic Commerce, have grown from \$6,800,000 in 1897, the year preceding annexation, to \$21,800,000 in 1914, and imports from foreign countries from \$900,000 to \$6,000,000. The shipments from Hawaii to the United States during the same period grew from \$16,000,000 to \$48,300,000, while those in foreign countries are negligible, amounting to less than \$60,000 in 1897, and only \$459,000 in 1914. Sugar, the leading Hawaiian staple, has steadily increased in value of output and the product for the last 10 years amounted to 10 billion pounds, with a value of 364 million dollars. Other important articles of production, according to the 1915 edition of the Hawaiian Annual, are pineapples, coffee and rice. So rapidly has the canned-pineapple industry grown that the leading share of our domestic consumption of pineapples is supplied by those from Hawaii, having supplanted those from Singapore and other countries. Stated in order of value, Hawaii's shipments to the United States in the last calendar year included sugar to the value of \$39,500,000; canned pineapples, \$6,000,000; coffee, \$500,000; hides and skins, \$189,000; molasses and syrup, \$158,000; rice, \$133,000; bananas, \$126,000; and fresh pineapples, \$106,000. Shipments to Hawaii from the United States comprise a large variety of articles, chiefly manufactures and foodstuffs. Representative items in last year's trade include iron and steel, \$2,720,000; breadstuffs, \$2,320,000; mineral oils, \$1,969,000; cotton manufactures, \$1,381,000; manufactures of wood, \$1,253,000; automobiles, cars and other carriages, \$1,186,000; and meat and dairy products, \$1,107,000. Other items, ranging from \$700,000 downward, include tobacco manufactures, spirits, wines and malt liquors, explosives, fertilizers, paper and manufactures thereof, electrical machinery and appliances, vegetables, automobile tires, fruits and nuts, chemicals, boots and shoes, fish, hay, vegetable oils, paints and varnishes, cement and butter. The sugar crop of the current year, according to the Hawaiian Annual, will approximate 620,000 tons, a record total; but, owing to lower prices, its value will be somewhat smaller than that of the preceding year. The coffee crop is also reported as being exceptionally heavy, estimated at 45,000 bags. Shipments during the cal-

Message from Whitmarsh

THE following message has been issued to members of the National Wholesale Grocers' Association by Theodore Whitmarsh, president of that organization. The reports that follow the president's message under separate heads are from the different committees:

To Members: With this, the January issue of the Bulletin, ends seven months of service since I took office as President of your Association. I have asked the Chairmen of the various committees to prepare reports of their work during this period that they might appear in this number.

Some of our Committeemen have written me that requests for information and assistance which they have asked for in previous issues of this paper have not met with the responses we should have from our membership if we are to attain best results. I want to again urge you all to read these reports of the committees carefully, and give the various committees the benefit of your experience. We want to be guided by the wishes of our membership at large in handling the affairs of the Association, and these wishes you can bring to our attention, among other ways, by answering promptly our requests for information. You will find some matter in the report of the Containers Committee in this issue that should have your attention, and a reply to the questions asked should be made to the Secretary.

A copy of this issue of the Bulletin is being sent to every wholesale grocer in the United States, members as well as non-members, that all may know something of the great good being accomplished by us for the wholesale grocers throughout the length and breadth of the land. Incidentally, we hope some of the non-members will feel constrained to join with us and help carry on our work.

On November 23d, Mr. Frank B. Connolly, President of the National Association of Retail Grocers, arrived in New York, and Mr. Beckmann and I, with some of the members of our Association in and around New York, had the privilege of entertaining him at the Arkwright Club, on November 29th. It was a pleasure to have Mr. Connolly with us and there were present on that occasion seventeen guests. Mr. Connolly favored us with an account of the activities of his Association, which was most interesting and indicated the great strides it is making under his able direction. The National Association of Retail Grocers is to be congratulated upon having so capable and forceful an executive guiding its destinies. I feel sure that the occasion strengthened the secure friendship existing between his Association and our own.

On December 10th, in Washington, we placed before the Department of Agriculture the estimates, received from our members, of the number of labels they have on hand bearing guaranty statements. This data we secured from our members through a request appearing in the previous issue of the Bulletin. This Association is asking for an extension of the time in which such labels may be used in order that we may dispose of those labels that were printed prior to the promulgation of the F. I. D. prohibiting the use of food law guaranties on the label. Our contention is that we should be permitted to use such labels as were printed before this decision was given out, because the serial number was at that time put on by authorization of the Government itself. We believe our request will be granted.

I have decided to call a meeting of the Executive Committee for March 14-15, in New York City, at which meeting we expect to have a full attendance. I should like to have our members communicate with us concerning any matters that they would like to have come before this meeting. We shall be glad to give attention to such matters as our members advise us are of interest and importance to them.

The meeting of the Chamber of Commerce of the United States of America is to be held at Washington, D. C., February 8th, 9th and 10th, 1916, and I have appointed as dele-

gates to that convention, Mr. Dana T. Ackerly, as National Councilor, and Messrs. Judson, Bethard, Drake, Wason and Lichty, with Mr. McGlasson, Mr. Beckmann and myself as alternates. I have had acceptances from all of these gentlemen, assuring their presence at this important gathering. I have virtually appointed our Advisory Committee as delegates to the Chamber of Commerce meeting and have decided to have a formal meeting of that Committee on February 8th, in Washington, to discuss important matters. The Federal Trade Commission Committee has received various communications from the Commission and have in turn asked the advice of the Advisory Committee. These matters as well as any other that our members may bring to the attention of the Advisory Committee will have its consideration, and the chairman, Mr. William Judson, at Grand Rapids, Mich., will be glad to hear from you regarding any suggestions you may have to offer for the consideration of this committee.

The Canners' Conference Committee met, at my request, with the Canners' Committee, in Washington on November 16th. Among the subjects discussed was that of the standardization of pea labels. As I considered this latter subject a vital one, going further than the mere standardizing of pea labels, I felt that our policy should be determined by our association, and called a meeting of our own Canners' Conference Committee for December 20th, in New York. Messrs. Wason, Stearns, Wilcox, Timms, Vallette and Mahlan attended. At this meeting definite policies to lay before the Canners' Convention in Louisville were discussed and adopted. I have asked this Committee to represent our Association in Louisville when the National Canners Association convenes. During the meeting of the Canners' Conference Committee it was recommended that a uniform pack of No. 10 tins of one-half dozen tins to a case be established; that we request every grocer to buy goods in half dozen cases and every packer to make his cases $\frac{1}{2}$ dozen No. 10 tins to the case, in order to standardize the number of cans in a case and to prevent errors in shipping. These committeemen were also willing to accept one-half dozen No. 10 tins in strong fibre board containers in preference to one dozen packed in wooden cases.

In another part of the Bulletin you will find reference to the Uniform Tares Committee's work regarding the question of hams and bacons in package form, to which I should like to call your particular attention.

There have also been some developments in regard to the subject of the Mixed Flour Law, reference to which you will find elsewhere in this number. They will interest all our members.

Harvard University has recently issued a Bulletin in regard to the cost of doing business for the retail grocer. It is a very instructive paper and I have asked Mr. Beckmann to copy it in this issue somewhat at length. I would advise every member to send to Harvard for a copy of their Bulletin, and would further suggest that you induce the retail grocers' associations in your locality to get copies for their members. They will find in it much of interest and profit.

I have appointed Messrs. Arthur P. Williams, of New York, and George P. Thompson, of New Orleans, representatives from our Association to the annual meeting of the National Foreign Trade Council at New Orleans, La., on January 27th, 28th and 29th, 1916. Mr. Williams will attend as Chairman of our Committee on Foreign Trade Relations, and his report of the proceedings will appear in a later issue of our paper.

It was recently my privilege to convey to Mr. Carl A. Lautz, newly elected President of the American Specialty Manufacturers' Association, the congratulations and good wishes of our Association. We have reason to believe that the cordial relations existing during the incumbency of office of his predecessors will be continued and strengthened by meetings of our conference committees for the discussion of problems of mutual interest.

It was also a pleasure within the past few days to extend

holiday greetings to the national organizations of Retailers, Brokers, Specialty Manufacturers and Cannerymen; and I take this occasion to say to all our members that I extend to each and every one of them a personal greeting. I hope the New Year will be one of great joy and prosperity for them. I am indebted to the officers and committeemen for their loyal and active support, a support that has made possible whatever progress we have made during the past seven months.

Respectfully,

THEODORE F. WHITMARSH,

President.

Advertising Committee

The Honest Advertising Committee is endeavoring to ascertain facts which may prove helpful to a proper conduct of business, contending that dishonest advertising is unfair competition and should not be countenanced.

A recent hearing before the Federal Trade Commission which is considering the question, developed, among others, the following facts:

Herbert S. Houston, President of the Associated Advertising Clubs of the World, informed the Commission that that organization has been in existence ten years and has succeeded in placing laws to prevent and punish dishonest advertising on the statute books of 32 states; that his organization had vigilance committees in various large cities of the country, whose duty is to gather evidence against dishonest advertisers, and endeavor to persuade them, through moral suasion, to correct misrepresentations or deception, before presenting the evidence to public authorities; that his organization was ready to furnish the Commission with evidence in at least one hundred cases, and could furnish much more if desired; that both the business world and the consumer were entitled to the protection of the Federal Government against dishonest advertising, and that it should exercise jurisdiction over this matter at the point where the authority of the states ceases; that the worst offender is the Federal Government itself, which carries dishonest advertising directly and without question through the mails, the solicitor for the Post Office Department having estimated that fraud orders showing losses aggregating \$239,000,000 sustained by the public had been issued last year; that this organization had adopted standards of practice for the guidance of advertisers; that the organization would submit to the commission a brief as well as evidence in the cases referred to; that the Commission should express a willingness to receive evidence of dishonest advertising entering into interstate commerce and make a ruling that it is unfair competition and unlawful under the law; that his organization would support the Commission in enforcing the law with the weight of the influence of its 14,000 members and 14 departmentals, representing the advertising branches of all the important industries of the country, with headquarters at 11 West 32d Street, New York.

James Keeley, editor of the Chicago Herald, characterized "Crooked Advertising" as unfair competition, and therefore unlawful within the meaning of the law. He said: "Although there is a law dealing with trade-marks, the greatest protection to trade-marks lies in the law pertaining to unfair competition. A government ruling calling crooked advertising 'unfair competition' would be the biggest thing for honest advertising. A private lie is personal, and may not hurt, but the printed lie is public, and of public consequence, and calls for public treatment. The press is a public utility, and might be regarded as a common carrier. It sells white space, and the value of that space depends upon public confidence. Nothing is so calculated to shake or destroy the faith of the public in advertising as misstatements, misrepresentations or deception in advertising. Publishers of newspapers and magazines are entitled to the protection of the Federal Government against acts which shake or destroy public confidence in advertising.

Honest advertisers are entitled to the protection of the Federal Government against dishonest advertisers, because of unfair competition. The consuming public should have a right to rely on the truth of advertising, and invest on the basis of their confidence in its truth, and therefore should be protected against imposition, by the Federal Government."

H. J. Kenner, Executive Secretary of the Vigilance Committee of the Associated Advertising Clubs of the World, presented to the Commission some evidence of dishonest advertising in specific cases without disclosing names. These cases include mail order houses, large department stores, perpetrators of fraudulent medical devices, and groups of peddlers working simultaneously in various states, through dishonest advertising. He referred to the "Printer's Ink" model statute enacted in many states to prevent and punish false advertising, and said that \$100,000 would be expended this year in investigating dishonest advertising. He said that the Food and Drugs Act did not suffice to correct false advertising, nor did the fraud orders issued by the Post Office Department.

W. H. Ingersoll, of the Ingersoll Watch Company, New York, spoke on behalf of the Association of National Advertising Clubs and Retail Advertising Clubs, the American Specialty Manufacturers' Association, the Poster Advertisers' Association, agricultural and religious publications. He cited specific instances of dishonest advertising, including advertisements of baked beans, which represented them to contain 80 per cent. of nutriment when consisting of 65 per cent. of water. He also cited advertisements of babies' food which represented them as mothers' milk, while containing 36 per cent. of cane sugar and 35 per cent. of starch. He classified false advertising into two classes, one the result of careless and inefficient preparation, but none the less unfair competition, and the other deliberate deception. He cited the advertisement of the "Fair" in the Chicago Tribune recently, in which 300 Ingersoll watches in French ivory cases were offered at 95c. and were represented as having been bought at 33 $\frac{1}{3}$ c. on the dollar. The fair selling price would have been \$1.25 each. This he did not criticize so much as the representation that the watches had been bought at 33 $\frac{1}{3}$ c. on the dollar, which he said was false, and unfair to competitors, especially small merchants who could not afford to buy a page of advertising in a large paper. He left with the Commission copies of the German and Swedish Unfair Trade Laws, and recommended an enactment along the lines of the former, which is very broad and empowers the Government to enjoin the publication of dishonest advertising. He said that this nation cannot compete with other nations if it continues to allow the great waste resulting from dishonest advertising. He did not regard the Adamson Bill as sufficiently comprehensive and broad to meet the situation, although very good as far as it goes, it being limited to the facts as developed at the hearings before the House Interstate and Foreign Commerce Committee.

Federal Trade Committee

The Federal Trade Commission is gaining the confidence of business interests as there seems to be little doubt but what they are seeking information which will enable them to handle trade problems in a manner that will be beneficial to the various trades.

I made a report to the Executive Committee at its last meeting in New York City, outlining our hearing before the Trade Commission while in Chicago last August. At that hearing I was accompanied by Mr. Samuel B. Steele, president of Steele-Wedeles Co.; Mr. Frank C. Letts, president National Grocer Company, and Mr. Oscar Remer, director, Sprague-Warner & Company.

It was very evident that the members of the commission

WHY SACCHARIN WON

The Long, Contested Suit of the Monsanto Chemical Works of Saint Louis, Manufacturers of Saccharin, Is Finally Decided in Its Favor.

The Supreme Court of the State of Missouri in handing down its *unanimous* decision that Saccharin is not deleterious to health, and declaring null and void the statute prohibiting its use recognized the principle that the amount used must be considered. This, the Supreme Court of the United States also did in its decision in the famous Bleached Flour case.

An excessive use of anything is harmful, whether it be sugar, salt or water.

SACCHARIN is much more desirable than sugar as a sweetening agent for soft drinks from any view point: (First)—Healthfulness; (Second)—Economy.

In using SACCHARIN the danger from the use of sugar is eliminated, and the infinitesimal amount of SACCHARIN that is required to sweeten cannot possibly be harmful to any one, either adults or children.

Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

Use SACCHARIN to sweeten and do not hesitate to declare its use on the label. **Such declaration stamps your goods as being healthful.**

MONSANTO CHEMICAL WORKS

Manufacturers of Saccharin

ST. LOUIS

Branch: Platt and Pearl Streets, New York

are anxious to secure all information pertaining to unfair competition that annoys or handicaps the wholesale grocery business of the United States.

We discussed at this Executive Committee meeting some of these questions for about half a day and they were considered of such importance to the grocery jobbers, that I was requested to confer with the Advisory Board, which as you know consists of all the ex-presidents.

I had planned a meeting of the ex-presidents in Chicago to consider only the subjects that we might desire to present to the Federal Trade Commission, but inasmuch as the ex-presidents are to meet in Washington in February, and attend, as delegates, the United States Chamber of Commerce meeting, I have concluded to present these Federal Trade Commission problems to the Advisory Board at that meeting in Washington.

As evidence of the interest that the Trade Commission has in the jobbers, I am pleased to say that I am in receipt of a letter from Vice-Chairman Hurley, calling my attention to the hearing we had in August in Chicago and asking if we did not wish a further hearing in connection with the matters that the grocery jobbers are interested in at Washington. It may be that we can arrange for a hearing before this Trade Commission during our stay in Washington in February.

At the request of Mr. Jay D. Miller, director of Sprague-Warner & Company. I met National President Connolly, of the Retailers' Association, and his executive officers in December, and we spent several hours discussing unfair competition on the part of certain interests that vitally affect the general grocery business of the United States. Mr. Miller read a very strong and carefully prepared paper on the subject.

Discount for Cash Committee

Your Discount for Cash Committee has sought to have the cheese merchants announce a discount for cash on their products. In talking the matter over with one of their representatives recently, the fact developed that some years ago they gave a discount for cash, but same was withdrawn owing to the lack of promptness by the jobbers in respecting the discount for cash terms. The Cheese Merchants Association hold a convention in Milwaukee in January and the chairman of your committee has in mind to arrange for a meeting with Ex-Presidents Lichty and McGlasson at Milwaukee and the subject of a just discount for cash will be thoroughly discussed.

Cash transactions mean the elimination of credits, accounting simplification, which make for lessened cost of doing business and afford a buying power, which very frequently is the means of profitable investment. We do not believe that the day is very distant when most of our business will be conducted on more of a cash basis. These considerations are quite as much to the advantage of the manufacturer as to the jobber. Make it your personal business to bring these points to the attention of manufacturers in your vicinity.

In order that the results we have already secured be perpetuated it is necessary rigidly and strictly to adhere to the spirit of all contracts entered into where the discount element is a feature. Two per cent. cash in ten days does not mean eleven, twelve, or thirteen days and very frequently controversies have arisen between wholesaler and manufacturer on this point, which have jeopardized the benefits enjoyed by the trade at large, simply because oversight, carelessness and in some instances an attempt to "put one over" resulted in the discount being taken after the expiration of the proper period.

Make some individual effort along the lines we have suggested—that of showing how necessary a two per cent. discount for cash is. A good, sound, convincing argument from individual customers has more weight than the contentions of an intermediary.

Every wholesale grocer should remember that when a manufacturer allows a discount for cash under certain terms of sale, that under no circumstances can such terms of sale be violated without jeopardizing that for which you are contending.

If your purchase provides for certain conditions, live up to them, or don't expect something to which you are not entitled. Further beneficial results are possible, but cannot be obtained unless the wholesale grocer will do his part to bring them about.

POSITION OF SUGAR IN UNITED STATES.

More than one-fifth of the 40,000,000,000 pounds of sugar that represent the world's production last year was consumed in the United States. The consumption of sugar in the United States, exclusive of its sugar-producing islands, during the fiscal year ending June 30, 1915, has been calculated by the Bureau of Foreign and Domestic Commerce, Department of Commerce, as 8,630,000,000 pounds, or 86 pounds per capita.

* Of the sugar consumed in this country in 1914-15, 1,941,000,000 pounds were produced on the mainland, 1,281,000,000 pounds in Hawaii, 589,000,000 pounds in Porto Rico, 327,000,000 pounds in the Philippines, and the remainder in foreign countries. Cuba, the leading source of our imported sugar, sent us 4,785,000,000 pounds in the last fiscal year, that quantity being nearly four times as much as that from Hawaii and eight times as much as that from Porto Rico.

Beet sugar now leads cane sugar by nearly 1,000,000,000 pounds in the yearly domestic product, having reversed the conditions which obtained 20 years ago. In 1895, for example, according to the Statistical Abstract of the United States, the domestic sugar product totaled approximately 775,000,000 pounds, the share of beet sugar being only 45,000,000 pounds. In 1915 our sugar product had increased to 1,941,000,000 pounds, the share of beet having grown to 1,448,000,000 and that of cane having decreased to 493,000,000 pounds. Meantime beet sugar has practically disappeared from our imports. Eighteen years ago, when the Cuban supply of cane sugar was cut off by war, we imported nearly 2,000,000,000 pounds of beet sugar. After the return of peace in Cuba our imports of beet sugar fell off sharply, and in the last fiscal year beet sugar imports amounted to less than 1,000,000 pounds.

The cutting off of the sugar supply of European countries has resulted in a remarkable expansion of our sales of sugar to foreign countries. For the fiscal year 1915 they aggregated 582,000,000 pounds, as against 22,500,000 pounds in 1900 and 40,500,000 pounds in 1880.

The following table presents the leading changes in the economic position of sugar in 1914-15, as compared with the preceding year.

	1913-14. Pounds.	1914-15. Pounds.
World's sugar product.....	42,053,000,000	40,424,000,000
United States cane-sugar product	601,000,000	493,000,000
United States beet-sugar product	1,467,000,000	1,448,000,000
United States imports:		
Cuban	1,927,000,000	4,785,000,000
Hawaiian	1,115,000,000	1,281,000,000
Porto Rican	641,000,000	589,000,000
Philippine	117,000,000	327,000,000
All other	18,000,000	309,000,000
United States exports sugar.....	72,000,000	582,000,000
United States consumption of sgr	8,794,000,000	8,630,000,000

TENTH ANNUAL MEETING.

The Tenth Annual Meeting of the National Wholesale Grocers' Association of the United States will convene in Boston, Mass., June 14th, 15th, and 16th, at the Copley-Plaza Hotel. Particulars as to rates and other information will be furnished later.

Now Nationally Famous



Sun-Maid Raisins

made of big, white California Muscatel grapes—chosen from 6,000 vineyards, dried in the sun, seeded and packed in pound cartons. Large, plump, luscious.



California Raisin Bread

Made with SUN-MAID Raisins

baked after our recipe by bakers everywhere. A new raisin bread, made doubly delicious by many raisins, and by Sun-Maid Raisins.

Here's New Business For You

National advertising has already made these two articles famous—but we have only begun. And their quality has made them winners. People are demanding Sun-Maid Raisins who never realized the possibilities in raisins. And people are eating California Raisin Bread who never thought of raisin bread before. Get this business for yourself in your neighborhood. Find the baker who is baking the best California Raisin Bread. Order Sun-Maid Raisins of your jobber. Identify yourself now with these winning products. Be the Sun-Maid man in your town, and capitalize on the hundreds of thousands of dollars we are spending on Sun-Maid Raisins and California Raisin Bread. Send in this coupon today for details of our plan to aid you.

CALIFORNIA ASSOCIATED RAISIN CO.

Membership, 6000 Growers Home Office, Fresno, California
Hearst Building, Chicago 113 Hudson Street, New York

Mail This Coupon to Our Nearest Office

Please send me complete details of plan by which I can make more money through increased sales of raisin bread and package raisins.

Grocer's Name

Street

City..... State.....[183]

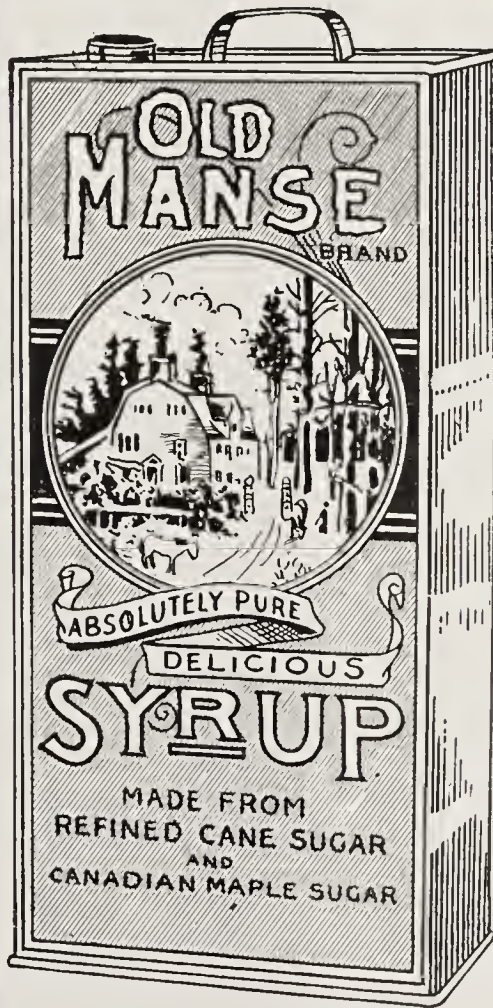


A liberal featuring of *Libby's* Food Products

marks the high grade store

Libby, McNeill & Libby

Chicago



Old Manse Syrup

Has given 25 years satisfaction.

Will continue to do so.

100% Pure Cane and Maple

PACKED BY

OELERICH & BERRY CO.

CHICAGO, ILL., U. S. A.



Food News from the East



NEW YORK, Jan. 30.—Once upon a time the grocery jobber looked on with something strangely akin to amusement when the retailers bitterly complained of the unfair competition of the chain store systems that were growing up in this and other large centres of consumption. "They should worry"—not. In fact, they would just as lieve sell a system of 20 or 40 or a hundred stores as a single one. And when it came to buying exchanges, which the retailers formed as a means of securing the same quantity concessions the chains had, the jobbers merely accepted them as specially choice pickings.

But that situation passed some time ago. The chains grew till they appealed to manufacturers as attractively as they did to the jobbers and the jobber found himself in exactly the same position as the complaining retailer. Philadelphia appeared to develop the new cause of unrest more striking than any other centre till probably not far from half the people of that city drew their groceries from systems independent of the old-line jobber. All this has long been known to the trade, but within the past four or five months the Philadelphia jobbers have been hard at work trying to check the rising tide in time to save themselves and the few remaining "independent" retailers. And all eyes have been on Philadelphia.

The result of all this was told to the New York State Wholesale Grocers' Association at its annual banquet here, a few nights ago, the narrator being none other than James Hewitt, president of the Tri-State Wholesalers and himself a Philadelphia jobber. It was, by considerable odds, the most interesting paper of the convention, by reason of its frankness and because it pointed out that there is salvation at hand for the jobber if he will make a complete reformation of his methods and adopt a new appreciation of his responsibility toward the retailers who depend upon him for their supplies.

Reduced to its simplest terms, the remedy lies in a recognition of the fact that the chain stores, with their central headquarters and administrative machinery are nothing more nor less than the parallel of the jobber and his retail customers. All that was needed was to co-ordinate the old factors on a new basis. That the Philadelphia jobbers have done it and are now making headway against the tide was what Mr. Hewitt told. Here is something of his story in his own words:

"There is nothing wrong in the chain store idea. As a rule, the community is benefited through its ability to supply merchandise at a moderate cost. This it is enabled to do by means of its great purchasing power, economy of conducting business, sales for cash, and the cutting off of a costly delivery service.

"Their competition has done much to stimulate the individual grocer to more active exertions to protect his trade, to see that his store is attractive in its appearance—to watch his expenses—to scrutinize his credit accounts, to see that his customers are pleased, and give them a "service" that insures their returning to deal with him.

"The retail grocer was quick to see the danger of the chain stores to his business, and in order to meet the competition of low prices formed the scheme of co-operative buying, so as also to receive the lower prices for goods bought in larger quantities.

"To the wholesale grocer was left the retailer, who was slow pay, and who could not afford to take advantage of paying cash for his merchandise. Consequently the jobber's business had to take on to a larger degree than ever the extension of credit, with its larger percentage of losses.

"The wholesale grocer was confronted with the great problem how to adjust himself to these new conditions. It was quite evident that he, too, must go through a process of development. He could not change the new condition if he

would, for this new business was founded on a sound economical basis.

"In his first effort to adjust himself the wholesale grocer allowed his resentment against the manufacturer for selling these associations to have free course. Efforts to keep the manufacturer from such selling, while it resulted in some success, was as a rule a failure. The wholesale grocers had lost the trade of the chain stores and now found that the trade of the wideawake independent grocer was being sought by the manufacturer through their co-operative buying associations.

"The manufacturer, while preferring to deal with the wholesale grocers, saw his trade with them diminishing and consequently was compelled to bring in a new force—a large corps of specialty men—whose business it was to see that distribution was obtained. As chain stores and retail buying exchanges were open to them it was quite natural that they received the greater benefit of their work. They were the easiest channel to obtain distribution.

Such was the condition of affairs with the wholesale grocer and is much so, even yet. Resentments, antagonisms, jealousies and boycotting are not the weapons to bring success and the sooner we confess it the better off we will be. After the chain stores had their wonderful growth and the retailers had established their associations, the wholesale grocers began to form associations. This was a step towards meeting the changed conditions and broadened their horizon. The effect has been to make the wholesale grocer a better merchant and lift him out of petty jealousies and fear of his competitors.

"What should be our attitude toward the chain stores? To sell them all we can. Whenever there is a chance to do business with them, seek it. What about the buying exchanges? Sell them also all you can. Both these organizations are in the business world to stay and the sooner we recognize this fact the better it will be for all concerned.

"But what about the individual retail grocer himself? Do all you can to help build up his trade. First, impress him with the importance of the right use of his credit. You do him a great deal of harm in giving him an undue time to pay his bills; it will eventually undermine his business. You do both him and yourself harm in allowing discounts for cash beyond the appointed time for such discounts. You are making him and yourself a poor merchant. The chain store has a wonderful advantage in this matter: it sells only for cash. He is a wise retailer who learns the lesson that prompt payments are his salvation.

"Associations have been brought into existence because of the failure or inability of the individual jobber to assist the retailer to withstand the competition from the chain stores.

"The next step in the changed conditions is that we be willing to learn from our competitors. We have seen the great advantage of co-operative buying and why not take advantage of it ourselves? There are advantages, and I venture to say surprising ones, in buying together. Look at the freight rates saved and consider the desire of the manufacturer to secure large orders at once, with prompt cash.

"In Philadelphia we have demonstrated this power—a number of times this winter with much advantage to ourselves and the manufacturer. Our salesmen, knowing that their firms are now acting as a unit, have taken hold of the merchandise offered and pushed it with much enthusiasm.

"The salesman now goes to his customer and is ready to help him secure his merchandise so as to enable him to compete with his neighboring chain store. The change is electric. We have made a new salesman; assured of his ability to sell, a retail merchant with renewed confidence in the salesman, and a manufacturer glad to see his merchandise being distributed through the natural channels once more.

"We in Philadelphia are now working along the lines indi-

Help Your Salesmen !!

To Increase Their Efficiency and Profits !!

To Make More Money for the House and Themselves !!

Present them with a copy of "HOW TO BUY AND SELL CANNED FOODS", written by J. A. Lee, a practical man, for the use of practical people, and a year's subscription to this magazine. It is a practical training course in general salesmanship.

When you add to the practical knowledge and selling ability of your house salesmen, and traveling salesmen, you present them the most valuable gift you can obtain. You at the same time make them more valuable to their employers.

Order for each a copy of this interesting and practical book which has subscribers all throughout the English-speaking world. It is the only book ever written on the subject, and has found its way to the desk of nearly every expert buyer and broker in the canned foods line in the United States and Canada and is used by the United States Government in its Commissary Department at West Point, New York and elsewhere.

It has subscribers among the canners and wholesale grocers of England, Australia, Hawaii, Alaska and elsewhere. The very largest wholesale houses use it.

We have arranged to supply the book (regular price, delivered, \$2.15) and a year's subscription to this magazine, THE AMERICAN FOOD JOURNAL, for the price of the the book alone, viz., \$2.15, but the money must accompany the order.

The book will be delivered by express immediately and a receipt mailed for a year's subscription to this magazine at once. If individual checks, or local checks, are mailed include the exchange, as we cannot afford any concession on this proposition.

THE AMERICAN FOOD JOURNAL

15 South Market Street,

CHICAGO, ILLINOIS

cated. It is not yet an Arcadia with us, but we have traveled very fast these past four months; overcoming objections and developing friendliness toward one another. Each wholesale grocer stands on the common plane and works unitedly toward the common end—the establishing of the retail grocer on a sound basis—merchandise economically handled and intelligently distributed, with an equitable return upon the amount invested.

"Our purchases are made as one, and our salesmen are well informed as to the cost. We find the manufacturer glad to have the co-operation of our men, who in turn show their appreciation by selling the goods. Credit lines are drawn sharply, and the retail grocer is receiving full value for his investments with the help of a body of men whose own welfare is wrapped up in his success."

WAITING FOR THE STEVENS BILL.

The Chain store system became the predominant issue of the convention, Secretary Gray referring to it as a very genuine evolutionary factor to be met calmly and seriously and Vice President S. L. Stix pointing out how the competition of the chain stores can be met while waiting the enactment of the Stevens bill.

"Are chain stores growing? If so, why? For, if they are growing and are performing a real service for the community," he said, "it would be like trying to make water run uphill to stop their growth. Let us study the facts.

"Taking for granted that large chains buy their stocks at practically the same cost as the jobber, and taking into consideration that they have to duplicate much of the service the jobber performs before their merchandise is delivered to their retail stores, the average independent retailer undoubtedly owns his goods at not over 5 per cent higher cost than the retail store of the chain operator. Now, the personality of the owner behind the counter certainly is a sufficient offset for this meagre cost disadvantage, for, when it comes to service, the independent can give as much or as little as he chooses and charge accordingly, the same as the chain operator is now doing.

"As I see it, we have to teach the independent to meet fire with fire. The independent doing a cash and non-delivery business can afford to sell leaders at the cut prices quoted by the economy chain stores, for the profit on the larger volume of business of other lines, which would necessarily follow, will more than cover the loss. The independent doing a service business, of course, cannot meet the cut prices of the economy store, but by shading his prices on the cut items he can hold his trade in line. By insisting on charging 10 cents for an item that the economy stores sell at, say, 7 cents, he simply drives his trade away.

"The number of items that the retailer would find it necessary to cut on would be found to be not so many, and, in fact, are even now decreasing in number, for, as a result of recent decisions of our courts, more and more manufacturers are insisting, where they are recognizing chain store operators on a preferred basis, that the chain stores, in return for such recognition, co-operate with the manufacturer by maintaining a fair retail price on his product.

"Where the manufacturer of a heavily advertised specialty refuses to make any attempt to establish fair market conditions, it is simply up to the independent retailer to take a leaf out of the book of the chain store man and meet him at his own game.

"In other words, let us put the two systems of merchandising on the same basis—the chain store system and the jobber-retailer system—and let the best win. If there is going to be any fighting with 'brass knuckles' let both sides use them."

"ALL PACKAGE" STORES MULTIPLY.

Several months ago I wrote you something about the "All Package" Grocery Store chain of Brooklyn, which then had five or six stores started. Last week I gave a little attention to the enterprise and was astonished to find that they now have exactly 50 stores in operation, 15 in Flatbush, 10 in Bedford Section, 7 in Bay Ridge, 5 in Bushwick, 4 on Park

Slope, 3 in East New Work, 3 in Richmond Hill, two in Greenpoint and one each in Old Brooklyn and Ridgewood.

These stores are all models of neatness, uniform in fitting, devoid of scales or wrapping paper and twine; everything packaged at a central warehouse and guaranteed as to purity and weight. No time is wasted in bundling or weighing, but the concern has added delivery, which it at first intended to cut out. They sell for strict cash but they work with telephones and mail order systems. I still note that the stores are not crowded, but the expansion of the concern is suggestive of either a prodigious nerve or some certainty as to backing. Just what stability there is in the concern is not reflected in any famous prominent personal names in its affairs.

The concern issues weekly price lists and operates women canvassers to drum up trade. The price list discloses a number of "deals," in which sugar is cleverly associated with the company's own private brands of coffee, cocoa, baking powder and extracts. Most of its leaders are its own brands of packaged goods, but it quotes some of the leading lines at cut prices; Kellogg's at 8 cents, Shredded Wheat at 10 cents, Cream of Wheat at 14 cents, Royal Baking Powder at 12, 22 and 42 cents, fancy biscuits at 4, 9, 14 and 23 cents for the 5, 10, 15 and 25 cent sizes, Ivory Soap and five bars for 19 and 35 cents, Sapolio, 7 cents, Crisco at 9 cents, Crystal Domino Sugar, 2 pounds for 19 cents, and granulated sugar 3½ pounds for 20 cents.

In general, the concern doubtless has economies in its central packaging and weighing establishment, and in its large purchasing facilities, but it is doubtful to note how it can long keep up this rate of expansion on such margins, unless it works its own brands more actively than appears probable.

THE STEVENS BILL FIGHT.

Meanwhile, the battle pro and con with reference to the Stevens bill is getting very warm here and in Washington. So far as the grocery trade is concerned, there appears no doubt that rising 90 per cent of all grocers favor the idea of price maintenance. The reasons for this and the rationale of the principle were forcibly pointed out at the jobbers' convention by Prof. Paul H. Nystrom, formerly of the University of Wisconsin, but now with the U. S. Rubber Co., an economist whose researches have been deep and convincing.

But in the dry goods trade, the big department stores appear to be the chief contenders. The so-called "National Retail Dry Goods Association" has been the chief opponent, has made vigorous campaigns against it, has canvassed the trade and circularized the country against the idea of being prevented from cutting prices, but the more the question is discussed, the more evident it becomes that this association is not truly representative of all the trade, many department stores favoring the price maintenance principle for specialties. In this city, Altman and Bloomingdale withdrew from the organization because they were being exploited against their wishes and lately John Shepard, head of the Shepard-Norwell Co. of Boston and the Shepard Co. of Providence, came out in criticism of the management of the association."

Then again, the druggists at the big "A. D. S." convention here met and endorsed price maintenance and several other bodies have endorsed the plan. Next came a big court victory for the price maintenance principle, a few days ago, when the Federal Court of Appeals—Judges Lacombe, Cox and Rogers—reversed Judge Hough of the Federal District court in the suit of the Victor Talking Machine Co. vs. Macy, deciding that the Victor concern, by its licensing of dealers conditioned on the maintenance of price, was within its rights. This was a speeding victory from the viewpoint of the law and is regarded as evidence that the courts are gradually coming to see price maintenance in a new and logical light.

And now, the promoters of the law have accepted the criticism of some of their friends that the law as it stands is somewhat imperfect and have had another Congressman Stephens—Dan V. of Nebraska—reintroduce the original Stevens bill with amendments tending to correct the objec-

TIN and FIBRE CONTAINERS

FOR

Foods, Drugs, Oils

Infinite Variety

Large Capacities

Prompt Deliveries

American Can Company

Chicago New York San Francisco

WITH OFFICES IN ALL LARGE CITIES

RUMFORD

The Wholesome

Baking Powder

A scientific preparation being the result of extended research by the celebrated chemist Prof. E. N. Horsford, for many years Prof. of Chemistry in Harvard University.

Dietetically speaking, Rumford is without fault; as a leavening agent it is perfect; as a keeper it has no superior.

DOES NOT CONTAIN ALUM

Its Purity is Unsurpassed.

BUY PURE COMPRESSED YEAST

The discussion about using starch in Compressed Yeast has reached the point in the United States of a decision forcing those who used it to declare the fact on the wrapper or label.

That is how we administer the Food Laws in this country.

In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

We Do Not Use Starch in Yeast

A. P. CALLAHAN & COMPANY

2407 La Salle Street

Telephone Calumet 410

CHICAGO, ILLINOIS

tional features. Advices from Washington indicate that there are already 209 members of Congress pledged to support the bill and its friends now look for its passage at no distant date.

LABELS LIKE A BILLBOARD.

It has long been recognized by grocery trade weather prophets that whenever the legislature is in session it is time to look for insanity there rather than in the ordinary asylums. The flood of bills affecting grocers, introduced at Albany is quite up to traditions, but the Hamilton-Fertig bill on labeling food products artificially colored or artificially preserved, rather breaks the records.

The bill starts off with drastic definitions as to preservatives and coloring, but its truly amusing proposition has to do with the proposed label which will look like a 12-sheet poster if the law is enacted. First of all one of the characteristic provisions is that formulae and ingredients must be stated on the label in full, with percentages, or filed with the Commissioner of Agriculture.

Among the things which the manufacturer must declare are the name of each food or drink, his name and place of business, the trade name or designation under which the food or drink is sold, the trade name of the preservative or coloring matter, the qualitative and quantitative chemical composition of the preservative or coloring matter, the proportion of each such preservative or coloring matter in each article of food or drink, and "shall thereafter amend or change the statements within one week after any change occurs in the facts."

All of which has to do with the manufacturer, whose label would be about as big as a blanket. But when the bill tackles the dealer, he must state all these facts on a large placard, for every one of the hundreds of compounds sold in his store. As the bill says:

"Dealers selling food containing coloring matter or preservatives as defined in the proposed act, must continuously maintain in the place of sale a sign or placard containing a reproduction of the statement filed with the Commissioner, to be in as many languages, not exceeding three, as the Commissioner requires. The Commissioner is authorized to further require the original and unbroken containers of food or drink, concerning which a statement must be filed, to contain a part or all of such statement."

Imagine what a grocery store would look like with all these placards displayed!

DILLON'S DELIRIOUS DIDOES.

The festive Dillon—State Marketing Commissioner in Chief—is still cavorting. There are still a few commodities sold to the people of New York state that he has not reformed, or even tried. Fruit, eggs, milk and a few others have furnished their share of glorious publicity in the papers, but so long as the list holds out Dillon will still hold the top of the column.

The latest movement in his crusade against the "milk trust" is to bust the trust by running one himself. He proposes to have the state erect a big dairy plant here, issuing bonds for its construction and then have all the farmers of the state consign to the department instead of to competitive private receivers. This will have the effect, to quote his own words, of solving the problem which has been trouble which has disturbed the state for 50 years.

Incidentally, Dillon proposes to make the scheme test the existence of a "milk trust." He says: "If there is no trust there will be no one to oppose the plan; if there is a milk trust the public sale of milk will bust it." But Dillon fails to suggest what significance should be attached to an outcome where there is a dairy with no milk, other than to claim that the "trust" caused its collapse. He leaves no room for the farmer to feel content to maintain his present connections for marketing. Dillon has the scheme all doped out as follows:

"The state will be asked to issue serial bonds in sufficient amount to build and equip this creamery and milk depot to be operated by a co-operative association of producers and consumers. Out of the earnings of the business the association will pay the interest on the bonds and 2 per cent extra to amortize them so that the bonds will be liquidated in about twenty years. This will not add one cent to the state appropriation, nor one cent to the tax bill of the state. But, on the contrary, the prosperity of the farmer will increase the value of his chattels and of his lands. These new values will add at least a billion and a half dollars to the assessed value of our farm lands, and the source of new direct revenue to it, that will annually pay for the total cost of the improvement many times over."

TUTTLE RAKES DILLON.

But Dillon's troubles are not all among the wicked middlemen and other buccaneers who insist that theories and practice in business are not always harmonious; he has critics among the producers, the very men for whose salvation he is laboring at a mere pittance of \$6,000 salary. One of them is Farmer Ezra Tuttle of Long Island, late deputy commissioner of markets in the Dillon department, and formerly prominent in Governor Dix's marketing escapade; also the promoter of the famous "Housewives'" experiment in Brooklyn and chief sufferer in its foreordained collapse. Tuttle, it appears, has resigned and come out in a long letter in the "American Agriculturalist" in which he not only ridicules Dillon's schemes but says that they have already been a flat failure from the producers' standpoint and are kept alive only through official misinterpretation and misstatement.

Tuttle declares that the work of the bureau has been of no value whatever from the standpoint of the farmer and that instead of the products having gone, as Dillon claims, directly to the consumer, they were bought at the state auctions by middlemen and speculators just as they were at private auctions; in fact that they have given rise to an additional middleman who attends the up-state auctions as the representative of the city receiver. Instead of the five per cent cost of selling, claimed by Dillon, Tuttle says it is often as much as 15 per cent, covered up by sundry fancy charges against the goods. To quote some of Tuttle's accusation:

"Dillon from the start has mismanaged and blundered. Lack of fact, lack of knowledge, lack of vision and desire for personal gain have been his greatest weaknesses. * * * Dillon blundered in associating his department so closely with his private publication * * * and you can't mix a private business with a public job. It won't work. Those farmers who lost money, some of them hundreds of dollars, paid dearly to let Dillon experiment with the returns of their hard labor."

And Tuttle knows something of what experiments cost. He paid dearly for his own enlightenment in the Brooklyn episode.

LOWRY'S SUGAR PROPAGANDA.

The propaganda of Frank C. Lowry of the Federal Sugar Refining Co.—and indirectly of all Eastern seaboard sugar refiners who are anxious to secure free raw material from foreign plantations as a means to permit their competition with refineries near the domestic cane fields and beet mills—has struck a live antagonist in Elias Wolff, president of the Insular Chamber of Commerce of Porto Rico, who has come back at him with a strong argument on behalf of the planters of that island for a retention of the present sugar tariff.

Lowry's argument in favor of a consumption tax on all forms of sugar, instead of an import tax that hits only the importer of raws, is already more or less familiar to your readers. This week he came out with a strong circular to Congress, urging his plan purely as a revenue measure. He cites Secretary McAdoo's revenue plan ("A") and argues in favor of adding his own schedule ("B") in the follow-

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According to Department of Agriculture Bulletin No. 118: Apply 0.62 pounds Borax to every 10 cubic feet of manure. Apply Borax particularly around edges; sprinkle with 2 or 3 gallons of water. This treatment should be repeated with each addition of fresh manure. Flies lay their eggs in fresh manure. Borax prevents their hatching.

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ing figures:

"A"	
	Amount of rev. secured.
1. 1c per gallon on gasoline	\$10,000,000
2. 50c per horse power on automobiles and inter- nal explosion engines	15,000,000
3. Stamp tax on bank checks	18,000,000
4. 50c per ton fabricated iron and steel	10,000,000
5. Retention present sugar tariff, net yield	38,000,000
Total revenue	\$91,000,000

"B"

Apply present minimum (Cuban) tariff rates as a revenue tax to all sugar consumed. On an estimated consumption of 3,900,000 tons for 1916, and without any further increase in the price of sugar, to the consumer, this tax would yield... \$92,019,200

Total revenue

\$92,019,200

"It would be far better," says Lowry, "if sugar could go untaxed, but if for the purpose of raising revenue, there must be a tax on this commodity of universal consumption, let the tax be returned to the people through the Treasury in the way of proper expenditures, instead of having a large part of it find its way into the pockets of a special class."

But Wolff comes back at Lowry with a five-pointed argument, which briefly stated is something like this: (1) Domestic sugar cannot be produced as cheaply by at least a cent a pound as abroad, because of the low relative fertility of home plantations, producing 20 tons an acre compared with 40 or 50 tons in Cuba; (2) Porto Rico and Hawaii levy no duties on American products and reciprocity should demand that none be levied on their products imported into America; (3) that fostering home industry makes us independent of crop shortage in foreign fields in case of war or other disturbance; (4) that it would make us independent of foreign supplies at normal periods and keep American money under the flag; (5) that if revenue needs are so pressing, the tax should come on top of present taxes and apply to all raw sugars alike, wherever produced.

SUGAR BROKERS MEET.

Speaking of sugar suggests that the annual meeting of the Sugar Brokers' association, a few days ago, resulted in once more placing the destinies of the organization in the hands of that old war horse, President L. V. B. Cameron of this city. Cameron has proved a safe and sane guide and a fearless exponent of fair practices.

In his annual report, Cameron referred to two important changes in trade practice during the past year—the adoption of the "firm price" plan and the selling of sugar futures on the Coffee Exchange. The first he commended warmly and the other he deplored. To quote his report:

"At a time when all contracts were off the refiners' books—when no loss would occur to the jobbing trade—when the market was at low ebb—new selling terms were put into effect, the substance of which is as follows: 'All contracts placed would take the entry price, without any deviation or allowance.' 'That upon an advance, refiners would go firm.' They also ask the support and approval of jobbers and brokers

"The substance of the new selling terms is placing the business on a business basis; of permitting brains to tell; of allowing buyers and brokers to judge conditions for themselves; which means that in posting the trade, brokers will have to give absolute and correct reports of the prevailing market conditions, based on facts, with discretion given them to protect their legitimate buyers' needs at the proper time, and not secure business on the old supposition, 'That we can always buy after the market advances.' This is one of the conditions that has brought about unsatisfactory results.

"The new terms are worth trying, for they bring the business up to a standard of an old-time saying, 'The most important part of every business is to know what ought to be done.' This requires forethought, interest and responsibility.

Such standardization will make judgment, courage and ability necessary assets.

"During the latter part of 1914 and the early part of 1915 the buying and selling futures of raw sugar on margin became a new feature in our domestic condition. While it is not for us to say whether this is to be or not, it is within our province at this time to refer to it as an important factor, as we are considering every feature of the sugar interests.

"The price of a commodity, so generally used as sugar, should be of a steady character, and not subject to the manipulations of a few speculators. To my mind, the buying and selling of raw sugars, even in the limited way that it has been done, has been a detriment to the best interests of the refiner, jobber and broker, as well as to the manufacturing interests of the country and the consuming public. It has been, and is, a source of disturbance in the general market, especially noticeable the past year.

"To this practice all legitimate business interests should be opposed. It reacts to the disadvantage of the people generally, and is an influence to high prices. It is a business based frequently on rumors which have no standing in fact."

ENGLAND PUTS SCREWS ON TIN.

Is England, under the guise of enforcing her "Trading with the Enemy" rules seeking to undermine the American tin trade? There is a growing suspicion of England's ultimate purpose, though it looks at this time as though there is nothing to do but to knuckle under and make the most of a bad mess, for the British authorities are apparently within their rights and besides that, they have the tin and if American metal trades want it they must accept the terms.

Already readers of these letters have learned of the requirement that canned foods packed in cans made from plate coated with British tin, cannot be re-exported save to England and how it has annoyed both can makers and canners. Now, it turns out that sellers of tin must go further and tell the British consul the names of their customers before the tin will be released. Here is the letter of Vice Consul R. L. Nosworthy:

"I should be obliged to you if you would kindly furnish me at your earliest opportunity with a list of all sales of tin made by you since subscribing to the tin agreement. Please make this list include the names and addresses of all individuals, firms and corporations to whom such sales have been made and the total amount of tin sold in each case.

"The list should be divided in three parts as follows: A—Those firms to whom you have sold in lots not exceeding one ton. B—Those firms to whom you have sold in lots of more than one ton but less than 5 tons. C—Those firms to whom you have sold in lots of 5 tons or more.

"From and after the first of January, 1916, I wish to request you whenever you propose to make a sale to persons or firms not in your list to be good enough to submit the name of such persons or firm to me before effecting the same.

"A statement on the lines above indicated should be furnished to me not later than the 7th of each month."

WHEAT SHARPERS CAUSE TROUBLE.

Certain big Chicago wheat speculators, who narrowly escaped getting themselves into a heavy loss by filling European orders for grain at a loss have apparently saved themselves, but at the expense of the reputation of the entire American export wheat business. They have brought down on themselves, already, a demand from European (largely British) buyers for redress at the hands of the State Department, have drawn at least two bills into Congress to place grain grading in the hands of the Federal government and, worst of all, have turned away from the American farmers orders for immense quantities of wheat, in favor of Canadian wheat; some say as much as 30,000,000 bushels. And that's the price honest traders pay for having a few sharp traders in their midst.

It will be recalled that a year ago, American speculators sold large orders to Europe for delivery of No. 2 hard winter wheat. When the crop actually was ready for shipment, it



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AN IMPORTANT ANNOUNCEMENT

TO THE JOBBER AND RETAILER



The St. James Importing Company, of New York and London, the well-known distributors of Waw Waw Sauce, has been bought by men of strong financial backing who bring to the Company not only ample resources but also the full benefits of many years' experience with one of the largest and most successful manufacturers of food products in the country.

Plans are already laid to place Waw Waw in its deserved position as the King of Table Sauces.

We cannot make Waw Waw Sauce itself any better but we can and will make Waw Waw Sauce a better seller.

An extensive advertising campaign in the leading Journals is now in course of preparation. No pains, expense or effort will be spared to make Waw Waw a leader in easy, steady selling, just as it is now a leader in quality.

Full details of the new plans will be mailed to jobbers and retailers throughout the country. In the meantime the already increasing inflows of orders are being filled promptly from our New York warehouse.

SPECIAL—If you are not fully acquainted with the unusual merit of Waw Waw Sauce, write at once and a full size sample bottle will be sent for trial on your own table.

St. James Importing Company NEW YORK

had been spoiled and would not grade anywhere near that rating. It looked as though the sellers would have to take their loss in an effort to make good. But instead, they jammed the stuff through on certificates now said to be "phony" and this stuff went forward on official Chicago certificate of examination as No. 2, that would not rate a No. 4; some of it, not at all, here. But the terms were technically such that the Chicago certificates settled the matter and though the English authorities destroyed whole cargoes as worthless, they had no redress, although they have appealed to the State Department.

Now two bills have been introduced into Congress to bring the grading under Federal control. These bills are, respectively: H. R. 4646, introduced by Representative Moss of Indiana on December 14, providing for the uniform grading of grain, preventing deception in transactions in grain and regulating traffic therein; the other is H. R. 8040, introduced by Mr. Lever of South Carolina on January 6, which is a bill to appropriate money to enable the Secretary of Agriculture to license and inspect warehouses.

Practically every grain exchange in the United States, every grain dealers' association and the millers' associations have endorsed the grain grades bill. The only opposition to the bill has been from the railroad and warehouse commissioners of Minnesota and Missouri and the Eastern exporters, with the exception of some farmers' organizations, which have favored a Federal inspection law.

NEW YORK STATE WHOLESALE GROCERS.

The 28th annual meeting of the New York State Wholesale Grocers was held here last week at the Biltmore, with a live attendance and certainly a fruitful discussion of some of the trade problems that are uppermost (to which I have alluded in the opening paragraphs of this letter). The following officers were elected:

President, Thomas R. Ward, Jr., of Weidman, Ward & Co., Albany, N. Y.; first vice president, Sylvan L. Stix, of Seeman Bros., New York; second vice president, E. S. Truesdell, of Newell & Truesdell, Binghamton, N. Y.; third vice president, Edward Cumpson, of T. & E. Cumpson, Buffalo, N. Y.; treasurer, Howard L. Sills, of John S. Sills & Sons, New York, and secretary, Nelson Gray (elected by the directors), New York.

The banquet, in the large music room of the Biltmore, was attended by about 150, and was preceded by an informal reception to National President Whitmarsh. Philip C. Staib officiated as toastmaster, and the speakers were State Comptroller Eugene Travis, State Secy. of Agriculture Charles B. Wilson and Joseph A. Lawson. Blessing was asked by the Rev. David Wells. The Corinthian Male Quartette rendered a number of concerted and solo selections.

HARTIGAN STILL RATIONAL.

Weight and Measure Commissioner Hartigan of this city is out again with a campaign of constructive regulation, rather than the threadbare policy followed by so many such officials of making the grocer the "goat" for political glory. Hartigan's various plans for helping the grocer by compelling uniform honesty and by educating the public to see things in some measure from the standpoint of the merchant have already been narrated in this correspondence. Now he has announced plans for 1916 which go even further in the direction of public education and enforced fair trading competition.

First of all Hartigan proposes to cut legal and departmental red tape and have the laws and ordinances so amended as to allow the commission to deal with flagrant cases of crooked weighing on his own account and promptly, instead of waiting for a lot of complicated references to other officials till after the force of the evidence has been lost.

Hartigan also means to continue his "Weight and Measure Week" and to build up the "Honest Weight and Measure League" which was formed as a result of that agitation. The League, it appears, has an enrolled membership of 116,000 and Hartigan believes he can make it 200,000 by June.

DIAMOND MATCH GETS ANOTHER MEDAL.

The American Museum of Safety has conferred the Louis Livingston Seaman medal—generally considered a sort of "Nobel prize" in the field of industry—upon the Diamond Match Company and its president, William A. Fairburn, in recognition of their humane and scientific attainments along the line of improved factory conditions and the promotion of better and safer matches.

It will be recalled that up to a few years ago the manufacture of matches was full of perils and no way had been devised to make them practical without rendering the workers in the plants liable to dental necrosis from the action of white phosphorus, an ingredient then essential in all matches. The Diamond Match Company devoted much time, skill and money to the discovery of some practical substitute for the poisonous white phosphorus and eventually succeeded in perfecting the sesqui-sulphide formula.

Although the company owned a patent on the process, it magnanimously surrendered it to the United States authorities for the benefit of all the people; making available to all manufacturers the fruits of experimentation, without any selfish retainers and paving the way for the Esch law, which compelled the discontinuance of the poisonous ingredients previously considered necessary.

It is commonly understood that the Seaman medal was conferred partially in appreciation of this public spirited act, as well as in recognition of the skillful work of Mr. Fairburn; also in appreciation of the welfare work brought about in Diamond Match factories as a result of its policy of promoting hygienic, social and moral working conditions.

PENN. STORAGE LIMIT CAUSES TROUBLE.

All the predictions made at the time Pennsylvania placed a limit on the period for which eggs and other food products might be kept in storage, have come true and as a result Philadelphia holders of eggs have lately been pocketing severe losses because of their inability to get rid of their accumulated stocks in ice houses before the limit date. It happens that the law made eight months the limit for eggs and, of course, the time for storing eggs is along in May or earlier. The result has been that the eight months' limit was reached this month, at the very time when the holders were loath to take the stocks out, but there was no other way out of it. And so they drew out all that the law required and sold them around 21 cents a dozen, which was really less than original cost, plus icing and carrying charges. Some reports place stability of a strong market.

"A. D. S." EXPANDING.

Something of the magnitude of the chain store movement, or the buying exchange spirit, was emphasized in the great gathering of the American Drug Syndicate, here last week. The sessions were held more or less all through the week, in conjunction with a big pharmaceutical show in Madison Square Garden, and not less than 7,500 delegates, accredited with votes, were enrolled. The gathering was emphatically in favor of the Stevens Bill. In the course of the week, it was voted to increase the membership from 20,000 to 60,000 stores, permitting the enrollment of 20,000 physicians and an equal number of dentists, there being now only 3,500 physicians and 500 dentists on the rolls.

COFFEE MEN WILL ADVERTISE.

A conference was held here last week between representative committees of the National Coffee Roasters' association and the Green Coffee interests, with reference to a joint campaign of education as to the value of coffee as a beverage. The subject was opened by President Ross W. Weir, who explained his ideas of the Roasters. It was not, he said, an effort to merely strike back at the makers of coffee substitutes, but to bring forward the idea that coffee has real food value and that much said against it is not true or justified, indirectly even. It was the opinion of the Roasters that the good from such a campaign was as much the concern of the Green Coffee interests as of the Roasters; hence the appeal for joint action.

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Apple Market Investigations for 1914-15

By CLARENCE W. MOOMAW

(Continued from previous issue.)

COMING to markets already heavily supplied with first-class fruit and of necessity being destined for prompt consumption on account of their condition, these apples sold for prices slightly below the market for stock with keeping qualities. Dealers who ordinarily would have paid fair prices feared to do so in direct competition with good, firm stock. On the Kansas City market alone it was learned that approximately 20 cars of boxed apples from the Northwest were sacrificed on account of arriving in ripe condition. It is thought that these apples sold at a discount of approximately 25 cents per box, for although they were in fair condition for immediate consumption, they had no storage value.

It is desirable for the growers to realize that no expenditure for refrigeration or cold storage can compensate for failure to pick and pack at the proper time. The refrigeration of overripe apples will not restore them to a sound condition nor prevent their progressive deterioration either in transit, in storage, or in the market. On the whole, there was noticeable a great improvement in all barreled stock arriving. The regulatory law of New York state caused the growers and packers to grade more closely and to display their names on the heads of the barrels. Thus poor, wormy, fungous, or scabby fruit, that formerly went to market in barrels, generally was kept at home.

Great improvement could have been made in shipping bulk fruit. A number of cars arrived in bad condition, due principally to two causes. First, large quantities of undersized, wormy, bruised, and otherwise defective fruit were shipped in heavily loaded cars and decayed easily when subjected to the heat generated in fresh vegetable products placed in bulk. Furthermore, bulk fruit was shipped frequently in ordinary box cars. It was impossible properly to ventilate the fruit in these cars, although attempts were made in some cases to slat the doorways, thus allowing a slight circulation of air. Some shippers used foresight and good judgment in ordering ventilators far in advance of shipment, but it is impossible to secure this equipment at all times when the movement of fruit products is heavy.

Many consignments of properly picked and graded bulk fruit arrived in very poor condition, because they were loaded in improperly constructed cars. Other consignments of bulk fruit, having been shipped under proper conditions, arrived at the markets in such good shape that the owners packed the fruit in barrels and placed it in cold storage.

In some cities the transportation companies provided for the fruit a minimum of protection from the weather. After a few days of continuous rain in St. Louis, Mo., the investigator of this office visited the levee, where thousands of barrels had been stacked three tiers high. It was noted that the commission men had attempted to protect the barrels with tarpaulins, but this was insufficient. The coverings failed to cover all of the barrels, and those at the bottom of the stacks were thoroughly soaked also as the water ran down the levee. These barrels immediately swelled, the hoops split, and the heads and staves bulged. The fruit depreciated 25 cents or more per barrel on account of poor terminal facilities.

In New York state the effect of the apple grade and package law was studied. The law is mandatory and provides for four grades—"Fancy," "A grade," "B grade," and "Unclassified." Very few growers packed the "Fancy grade," because they thought its specifications too strict, and owing to the large crop and scarcity of labor there was a tendency to pack those grades which could be prepared most easily.

The first year's operation of this statute resulted in a marked improvement in the marketing of the apple crop of the state, and it is generally conceded that it has been very beneficial. It established confidence at a time when confidence was sorely needed. Its grades for the most part proved to be

a common language between shippers and receivers, sales being made readily and adjustments of difficulties more easily effected upon the basis of its standards. It may be said that the New York growers strived to comply with the law. Many, fearing that they could not do so, marketed their crops in bulk during the fall, and much inferior stock was kept at home, thus leaving the market to the better grades.

The New York state law differs from the Federal apple grade and package law, commonly known as the Sulzer law, which is not mandatory. Some packers who may have failed to comply with or who did not desire to grade by the New York state law have attempted to take advantage of the conflict between the two laws. The New York state law does not prevent compliance with the Sulzer but imposes additional requirements as to grading. It frequently occurred in case of condemnation by the state inspectors that the packers erased the New York markings and substituted brands allowed by the Federal law.

With the enactment of grade and package laws in other commonwealths, there are likely to be many conflicts between the laws of the states and between state and national laws. The advisability of uniformity in legislation along these lines is apparent. Maine and Vermont now have individual laws providing for standard grades and packages for apples, and legislation is pending at present in Massachusetts, New Hampshire and Connecticut. These laws are all very similar, and it is believed the fruit interests of the various sections will co-operate in securing as great uniformity as possible. Utah, Oregon, Washington, Montana, and Idaho have laws fixing the standard box and providing for the elimination of wormy fruit, but the grades are not specified. These laws are believed to have rendered an excellent service in improving the general quality of fruit grown in the sections affected.

Reports emanating from unofficial sources indicated that sufficient cold-storage space was not available in the fall of 1914 for conserving the supply of apples for distribution throughout the winter and spring, and it is claimed that large quantities of apples wasted in the orchards for lack of storage facilities.

Cold-storage owners must fill their space for as much of the year as possible. Eggs, butter and other commodities are sources of revenue during the summer and early fall, especially in the markets, but these commodities generally give place sufficiently by the first of October to provide for the apple crop. During the past season, however, the egg market was very inactive, and stocks cleared very slowly. Space for apples, therefore, was in great demand, and many storages would quote only a season rate, whether the fruit was to be stored for a long or short term. There is no indication that the rates were increased; on the other hand, in western New York the storage firms reduced the usual 50-cent charge to 40 cents on account of the low prices which were being paid for apples.

Until the past season accurate information regarding the quantity of apples placed in cold storage and the progress of the movement during the winter and spring has not been available to the public. In October the Office of Markets and Rural Organization undertook to secure and publish the data, so that growers and dealers alike might direct the sale of their holdings in an intelligent manner.

The co-operation of the cold storages was solicited for this purpose, and a large number assisted in making the office reports valuable. However, many concerns failed to answer the inquiries which were sent to them at the end of each month, and many submitted only partial reports, some reporting one month and failing to do so the next. The holdings of such firms necessarily were eliminated from consideration in estimating the progress of the movement, for the reason that a comparison between the holdings from month

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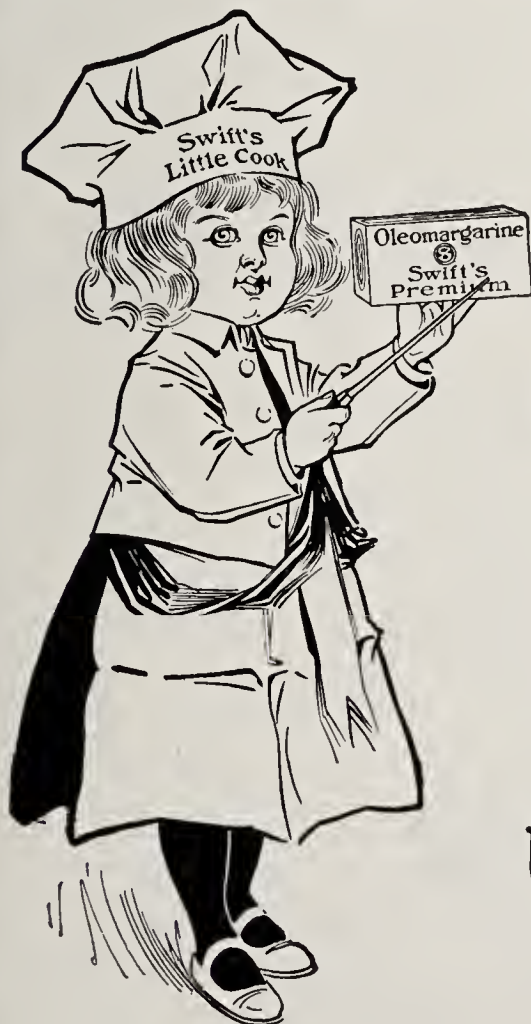
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to month with the holdings on December 1 is necessary for determining the movement.

The office mailing list now includes the names of 667 cold-storage firms. Of these, 443, with a capacity of 8,902,013 barrels, have reported their holdings one or more times during the season. The balance, or 224 concerns, failed to reply at all. It was not possible, therefore, to publish quantitative reports showing the total number of barrels and boxes held. Still, the number of firms which responded was thought to be sufficiently large to justify the issuance of percentage reports through the medium of the press. This was done monthly, and a detailed report of each investigation was printed in the current number of the Agricultural Outlook and mailed to the cold storages, trade papers, and individual growers and dealers. These investigations embraced the holdings of apples not only during the season of 1914-15, but also of 1912-13. The crops of the two years were similar, and it was thought that a comparison of the holdings would be helpful to growers and dealers in arriving at true values.

Estimating upon the basis of the reports received, it was found that the holdings on December 1, 1914, amounted approximately to 11½ per cent more than those of December 1, 1912; on January 1, 1915, 23 per cent more than January 1, 1913; on February 1, 1915, 28.4 per cent more than February 1, 1913; on March 1, 1915, 5.7 per cent less than March 1, 1913; on April 1, 1915, 15.6 per cent less than April 1, 1913; on May 1, 1915, 13.2 per cent less than May 1, 1913.

There remained in storage on May 1 approximately 10 per cent of all apples held in the coolers on December 1, if the conditions existing in these plants may be accepted as a criterion of the general situation. It is interesting to note that the market supply of apples as indicated by the 179 plants on May 1 was 13.2 per cent less than May 1, 1913, whereas the crop of last year was much in excess of two years ago.

It would appear, then, despite the war and depressed conditions here, that the actual movement of apples from cold storage has been very satisfactory in comparison with 1912-13. It is thought that the liberal consumption of this fruit was due to the uniformly low prices which prevailed in the early fall and throughout the entire year. In February, however, the situation looked especially grave, for the reports of February 1 indicated unusually large holdings. In publishing the data secured at that time the office issued a timely warning to growers and dealers advising them that a regular, vigorous movement would be required to prevent disaster in the spring. Fortunately for trade in apples, the late spring prevented heavy shipments of first southern vegetables and made conditions excellent for the handling of apples, so that holdings rapidly diminished.

Reports of four shipments of boxed apples made during the past season from the Pacific Northwest via the Panama Canal to New York City for export were secured. These shipments, which were made in December, January and February, consisted of 54 cars and represented practically the entire quantity forwarded through the canal. With the exception of 8 carlots, all of this fruit arrived in New York in first-class condition. These 8 carlots, which represented the total shipment upon one of the steamers, showed overripe condition and slight decay, supposedly as the result of poor refrigeration conditions.

All of these Panama shipments were sent across the Atlantic. Although no cold-storage space was available on board the trans-Atlantic lines, practically all of the fruit, with the exception of 8 carlots previously mentioned, was said to have shown excellent condition and sold for relatively good prices in the European markets.

The water freight rate from the Northwest ports via the Panama route to Brooklyn is 55 cents per hundred pounds, whereas the railroad rate is \$1 per hundred pounds. It is to be remembered, however, that the Panama route is available only to those fruit districts which are near the Pacific coast, and that when wharfage, dockage and inland freight are included there is a relatively small saving even for those districts.

It is estimated that the saving to Hood River on shipments

via Panama is 16 cents per box for apples which would have gone in railway ventilators and 27 cents per box for refrigerators. The saving to Yakima and Wenatchee is from 8 to 10 cents on ventilator stock and 18 to 20 cents on refrigerator stock. Owing to the long time (approximately 37 days) required for shipment through the canal as compared with shipment by rail and the resultant risks, it is thought that the actual saving per box is inconsiderable, and that for this route to be largely profitable to Pacific Northwest shippers the rate of transportation must be lowered and trans-Atlantic cold-storage space must be available upon arrival at New York City.

As far as physical handling is concerned, it is believed that the canal route has been proven entirely practicable, although its use upon the basis of present rates necessarily must be confined to shipping points near the Pacific coast and to markets on the Atlantic seaboard or beyond. Apples coming through the canal at present cannot be distributed profitably inland from the Atlantic coast, for when terminal and inland charges are added this route cannot compete with the transcontinental railways.

It has been stated that prior to the shipping season of 1914 it was generally believed, under the war conditions, that Europe could not be expected to demand its usual quota of apples; consequently there was much speculation as to what would be done with the export surplus. When the crop of winter varieties began to move, shippers cautiously forwarded considerable quantities to England. Although sales were not high, the low level of prices obtaining in the United States justified continued shipments across the Atlantic. The cheapness of the fruit invited heavy consumption, with the result that the movement increased rapidly until the quantities forwarded not only exceeded all expectations, but proved to be little short of the largest export years.

(To be continued.)

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Chicago, March, 1916

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In This Number.

Professor Farrell and Butter Storm.

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Supreme Court Holds Packer Liable.

Views and Principles of One Official.

Notes from Field of Food Control.

Commissioner Helme Escapes Death.

Continuing Guarantee Held Good.


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Vol. XI.

MARCH, 1916.

Number 3.

Professor Farrell and the Butter Storm

WE TAKE particular pleasure in presenting to our readers in this issue of THE AMERICAN FOOD JOURNAL a contribution from the gifted pen of J. J. Farrell, a maker of butter, and, incidentally, and when not employed with the duties of the presidency of the National Creamery Buttermakers' Association, Commissioner of the Food Department of the State of Minnesota. As has been said many times in the editorial columns of this paper, no one will ever be denied the privilege or courtesy of space in this journal, if he really has something to say. The duties of an editor not infrequently become monotonous and irksome from the fact that much of the material offered for publication savors strongly of piffle, lacking totally in value. The constant perusal of such stuff works, as Coleridge would say, like madness on the brain. Not so, indeed, with the annunciation of our esteemed contributor, the good Professor Farrell. This child of his fertile brain fairly sizzles with vim and ginger and we take a just pride in delivering intact to our readers what we believe to be a masterpiece of its kind.

Under the ominous head "The Storm Breaks," the good professor thunders out as follows:

In the February issue, the American Food Journal, under the caption of "Enter Jekyll and Hyde," quotes an article which appeared in the Hoard's Dairyman, issue of January 28th, signed by the writer and Martin H. Meyer, president and secretary, respectively, of the National Creamery Buttermakers' Association. Speaking for our association we at that time said:

"The one thought constantly in mind with the National Creamery Buttermakers' Association is protecting the dairyman against unjust dairy standards, against adverse dairy legislation, and against excessive and unequal transportation charges."

We had previously stated that a butter standard requiring 82.5 per cent of fat was excessive, and we think so yet. Any-

thing wrong about that? Oh, my, yes; it offends the tender sensibilities of the American Food Journal which, for the purpose of attacking the writer, quotes an article from the Delano Eagle as follows:

"Minnesota creameries are expected to resist a ruling of the Federal internal revenue service that butter containing more than 16 per cent moisture shall be deemed adulterated and creameries shipping butter containing moisture in excess of this limit must take out Federal licenses. The test is expected to be made on the seizure of four tubs of butter from the Bellingham creamery by E. J. Lynch, internal revenue collector, who imposed penalties aggregating \$868. The creamery men declare that the revenue service had no authority to fix the standard of butter, that its act is arbitrary and that it will not be upheld by the courts. John J. Farrell, State Dairy and Food Commissioner, who is also president of the National Creamery Buttermakers' Association, will lend the creamerymen all the aid possible, as he regards the action of Mr. Lynch as unjustifiable."

I don't know from what source the Delano Eagle secured its information. It is sufficient to say that the writer has no quarrel with Collector Lynch of St. Paul, who merely carries out the orders of his superior at Washington, D. C. Mr. Lynch made no seizure of butter from the Bellingham creamery, nor did he impose penalties in the sum of \$868 or any other amount, nor is there any friction between the writer and the Internal Revenue Department save a difference of opinion. As to the validity of a regulation made by the former commissioner of internal revenue, approved by the secretary of the United States treasury in 1902, which is in substance as follows: "It is therefore held that butter having 16 per cent or more of moisture contains an abnormal quantity and is classed as adulterated butter," now the creamery associations, both national and state, are of the opinion that the above regulation is void and base their opinion upon the decision of the United States District Court affirmed by the United States Circuit Court of Appeals (Eighth circuit, April 17, 1912), who held the regulation void in that said regulation was unauthorized by law and was in effect attempted legislation. The Revenue Department refused to take the last

step, viz.: appeal to the United States Supreme Court for a final decision. There the matter rested.

On behalf of the National Creamery Buttermakers' Association and the Minnesota State Butter and Cheese Makers' Association I am endeavoring through proper channels for the trial of a case for final decision in the United States Supreme Court. This is the offense for which I am actually attacked, and in a lot of asinine drivel accused of numerous violations of law, high crimes and misdemeanors, including theft of public funds. Now, I make no claim to be sensitive, but after a roar of that volume I examined the beast and found "the same old skin, the same old roar and the same long ears" that have come down the ages; in a word, the immortal ass whom we have always with us. We have read of the undesirable Jekyll and Hyde, but we do not recall that he was ever charged with being an assassin of character. In that respect he is the superior of the American Food Journal.

The American Food Journal having in its opinion defamed us sufficiently assumes a wise and judicial air and emits the following: "We do not need to mention names, but we merely call attention to the rank violation of the law and the criminal disregard of the public health pointed out in our issue of the past three months in the matter of butter and its manufacture." Now we are going to find several reasons why assassination of character is desirable and why creameries and public officials, who are in the opinion of the American Food Journal undesirable (to the cottonseed and oleomargarine trust), should be vilified, slandered and reviled. In the November issue, under the caption of "Impending Storm in the Butter World," the American Food Journal says:

"It will behoove certain of our friends engaged in the administration of food control in a number of states to give serious thought to the gathering war cloud in the butter and dairy world."

Further along, referring to the Haughen bill, the following statements occur:

"Introduced in the last session of Congress is a bill to prohibit the use of butter in the manufacture of oleomargarine. This bill, as drawn up, further established a standard of whiteness for oleomargarine which the manufacturer of this product cannot reach. This standard was arrived at by the Bureau of Standards at Washington. If this standard were adopted there would be but one outcome—the annihilation of the oleomargarine industry."

Does the American Food Journal know that the majority of oleomargarine now sold to the public contains no butter. Of course they do, but it is not good policy to refer to that subject; the laws of Minnesota compel the statement upon the label of the names and percentages of ingredients. Here's the product of six large manufacturing concerns selling oleomargarine in Minnesota:

"1. Oleo oil, 40%; lard, 28%; cottonseed oil, 15%; salt, 3%; moisture, 14%.

"2. Cottonseed oil, 46%; oleo oil, 37%; salt, 4%; moisture, 13%.

"3. Oleo oil, 41%; cottonseed oil, 38%; lard, 4%; salt, 1%; moisture, 13%.

"4. Oleo oil, 48%; cottonseed oil, 30%; lard, 6%; salt, 1%; moisture, 12%.

"5. Oleo oil, 22%; cottonseed oil, 49%; lard, 17%; salt, 2%; milk solids, 2%; moisture, 8%.

"6. Oleo oil, 35%; cottonseed oil, 20%; lard, 30%; salt, 3%; moisture, 12%."

Are they seeking the annihilation of the oleomargarine industry? No, but as before stated the law compels the statement; it is therefore assumed to be truthful—whereas, the American Food Journal is a law unto itself wherein the word "truth" is a nonessential.

They further state: "The oleomargarine people and also the cottonseed oil people find themselves with their backs to the wall. They find themselves in the critical position of him who must fight for his very existence." You inadvertently made a truthful statement, and you could have gone further

and said that some of the said backs are against the inside walls of a United States penitentiary; and they are not putting up much of a fight at that, for the reason that their teeth are drawn and for the further reason that it isn't a good place to fight; also they are too tame to fight. But, then, "glory be," they have the American Food Journal to conduct a war of words, and that helps some. Witness the following:

"That they are not going to lay down their arms and die as peaceful martyrs, is evidenced by the fact that considerable activity may be noted among them. The clouds are gathering. The clans are assembling for concerted action. Chief among these are the cottonseed crushers' associations, which at the present time enjoy particularly strong backing in Congress."

We have now arrived at the point of "concerted action," and looking at the assembled clans they appear to be composed of the oleomargarine interests, the cottonseed oil interests, the American Food Journal and the subsidized press, each bearing a banner the color of yellow butter upon which appears the slogan, "Federal Inspection of Creameries."

The American Food Journal then proceeds to paint butter and refers to the millions of dollars that could be saved to the consumer if the laws were enforced and what they term the fraudulent practice prohibited. Now let's see about the law and where fraud exists. The act of Congress, May 9, 1902, defines butter to mean "the food product usually known as butter and which is made exclusively from milk or cream, or both, with or without common salt, and with or without coloring matter." This is the law, and the American Food Journal, no matter to whom their sympathies may extend or where their *interests* lie, ought under the rule of common decency and honesty cease to misrepresent it. Their attitude towards butter in its entirety is best described by the short and ugly word. Notwithstanding this they have the brazen effrontery to conclude the November article with the following:

"The American Food Journal has no interest in the controversy between the manufacturers of butter and oleomargarine other than that of friendship and fair play for both factions and it is in this same spirit that we wish once more to warn those responsible for the contemplated anti-oleomargarine activity to think well before they act. They are surely sowing the wind which will bring forth a whirlwind of destruction unto themselves." This is a whopper!

We turn now to the December issue. Under the title of "Federal Inspection of Creameries," passing a prelude of junk, the con game is again put in working order and the friend of the creameries and defamer of public officials says:

"Publicity has been given to undesirable conditions found to be existing in many of the creameries, large and small—publicity very much of the same type as that which was showered upon the packing houses in the days following the publication of 'The Jungle.' . . .

"It would be quite in keeping with this knowledge, and, moreover, consistent with sound business policy, for the American creamery men, immediately upon the assembling of Congress, to demand that the Department of Agriculture take over the supervision of the manufacture of butter and cheese and establish a system of inspection similar to that now in effect in the Bureau of Animal Industry."

Yes, there has been publicity of an untruthful character, loads of it. There was an eruption coincident with the November issue of the American Food Journal of like character in several parts of the country, each attacking the creameries with assertions and generalities, not one presenting specific proof in corroboration of their statements. The methods were the same as "The Jungle," with the exception that no proof was presented to substantiate the assertions indicating that those responsible for the attack were familiar with dirty methods and that the concerted action threatened in the November issue by the oleomargarine and cottonseed oil interests became an accomplished fact. Federal inspection of creameries and cheese factories would be a grand thing (for said interests). It would bring about just what

it has accomplished in the case of meats, viz: control of the raw material, the purchase price and the selling price to the public by the consolidated packing houses. Merely another step for the control of foods, another step to levy a per capita tribute upon the consumer. Let's centralize all power at Washington, D. C. We have some of it now: just one illustration, the Gould amendment to the Federal Food and Drugs Act requires the statement of weight, measure or numerical count of the contents upon the labels of all foods in package form, effective September, 1915. A ruling by the federal authorities is in substance, that bacon and hams wrapped in cloth or paper are not in package form within the meaning of the law therefore a statement of the weight is not required upon the label. Who is the beneficiary under said ruling? Not the retailer, who must pay the packer the same price per pound for cloth, paper, etc., as for the meat contained therein (which not infrequently weighs one pound). The retailer in turn charges it to the consumer. By all means give us federal inspection and control, then the packing interests will be served; the little fellows can work out their own salvation. It is a grand old decision for the meat barons, but the correct name for it is legalized robbery.

The American Food Journal closes its December article with the following exhortation: "Now is the time for the far-seeing, broad-visioned creamerymen to get together and lead the movement for the rehabilitation (whatever that is) of their industry." Fall in, get together, don't keep the pious and far-seeing exhorter waiting! Remember that "rehabilitation" is just round the corner, grab some before it is all gone, it looks like oleomargarine and tastes like it, but, no matter, the exhorter tells you that it is marked "U. S. Inspected and Passed." He doesn't tell you why, so we will: The legend "U. S. Inspected and Passed" is required by law to be shown upon the carcass of every animal slaughtered for food and to be shipped in interstate commerce, all by-products in containers that are to be used as food must bear a similar statement, and inasmuch as oleomargarine is largely composed of the fats of the above described animals it comes within the provisions of the meat inspection law. Not as a mark of superiority or of virtue, but a requirement of law.

Now if you will examine the name on the collar of the American Food Journal, exhorter, you should have little difficulty in locating its owner. All that he is trying to do is to "get your goat," and he evidently thinks that he has succeeded, for in the January issue he communes with himself thusly: "Without wishing to resort to levity, it might be proper to compare the butter people at the present time to a flock of frightened hens (the mean thing) scurrying towards the coop at the approach of a wind-heralded storm."

Somebody stop him, shut off the wind, i. e., hot air; he has stampeded the poultry and is hot on the trail of a mare's nest. Let him have that \$600,000 that he is raving about; do anything to stop him—he's running amuck.

If the editor of the American Food Journal thinks he is fooling the public as to his enmity toward the creamery industry and his friendship for the oleomargarine interests by such transparent poppycock as has appeared in the last four issues, he must be the victim of ingrowing paresis. A printing press will run out rotten effusions with the same facility with which it produces classics; the wonder is that even an inanimate printing press does not kick against such evident prostitution. Fortunately, the creamery industry is so well established and butter stands so high in the confidence of the public that the mud slinging of the interests has no more effect than a parasite crawling over an elephant, but a clean elephant does not enjoy parasites.

In closing its screed in the February issue the American Food Journal, after bewailing the horrible conditions for which in their disordered imagination they hold us responsible, threaten to do something appalling. In brief, they are going to separate us from our job. How? This way: "There are also laws to impeach and remove from office, or compel them to do their duty. How long will they be allowed to continue in their double life? How long?" It will be a long, long time before you will impeach or remove from office any decent public official in the performance of his duty. Those who enjoy your favor are in greater danger of

removal, as the records will prove. "We do not need to mention names, but we merely call your attention to" certain of your pet friend officials who were taken by the scruff of the neck and thrown bodily outside of the breastworks without the formality of a hearing. Too late they prayed for deliverance from their friends. I've fought skunks before; I know their habits, and one is always safer on the windward side.

J. J. FARRELL,

President National Creamery Buttermakers' Association.

Now, professor, that we have given you every courtesy within our power and made your views public in accordance with your request, will you do a service to the country at large by answering a few simple questions? For it must be apparent to you by this time that the country at large has awakened to the shameless frauds which the butter makers are perpetrating with impunity:

Do you own a creamery?

Do you own, or have you any interest or stock in any creamery associations or companies?

Are you in a position to treat the food product butter in the same manner and on the same basis as other products manufactured and sold in the state of Minnesota?

Do you believe in standards for food products, and on this subject did you not vote in favor of the adoption of certain standards at the meeting of the Food Commissioners in Berkeley, August, 1915?

Do you consider in arriving at a standard that the food manufacturers should be consulted and their word taken as the final judge of what is a fair standard for the food product that particular manufacturer creates?

Laying all prejudices and bias aside, what do you consider as a fair butterfat standard for butter? What is a fair moisture content standard for butter?

You have admitted that you are against both of the standards as promulgated and recommended by the federal government and the various state governments. You mention the decision of the United States Circuit Court of appeals with reference to the regulation of moisture content in butter. This decision does not hold that 16% is a just or unjust limit. It is to the effect that the Secretary of the Treasury has not the authority to say arbitrarily that 16% constitutes an undue amount of moisture in butter, and that therefore the federal government should have introduced testimony at the trial of the case to prove that moisture was added to the butter with the intent to defraud; that is, that butter containing 12% of moisture might be adulterated, if the manufacturer, be he creameryman or farmer, had maliciously and fraudulently added moisture to the finished butter with the intent to deceive and defraud his customer. On the other hand, butter manufactured without intent to defraud and without having additional moisture incorporated into it by the manufacturer might contain 16%, 18% or perhaps 20% moisture without being adulterated; that is, it had not been so manipulated as to contain an undue amount of moisture with the fraudulent intent of the party who made it.

Tell us, pray, is it not a fact that the butter man of today watches his overrun? Is it not a fact that the dairy press has been full of data concerning overrun, that the press admits that today 25% overrun is proper, whereas ten years ago this would have been considered criminal?

What of the creameryman who stops his churn and has a chemical analysis made of the product, and where he finds that it contains too little moisture, carefully adds water to the product? What of the creameryman who by careful manipulation and control of the temperatures so manipulates his churn that he can get 15.90% moisture into the finished product? Do you call him a good citizen of Minnesota, and are you as food commissioner and the sworn officer of the law willing to vouch for this gentleman?

Do you consider the use of neutralizer by your Minnesota creameries as a decent act, and do you consider that by the use of this and the manipulation of rotten cream so as to produce butter that tastes fair, that they are treating the citizens of Minnesota in a fair, proper and just manner, or do you consider that the citizen who buys this manipulated product has been cheated?

What would your Minnesota citizen pay for white butter, this is, what would he pay for "natural color" goods, particularly in the winter time? Do you think he would buy it at all, or would he pay more than 10c or 15c a pound for it?

Now, let your creameryman color it as he does, and let him get the today market price for extra or first butter—do you consider that the consumer has been defrauded out of any money by this artificial coloration undisclosed by the manufacturer?

Do you agree with other food commissioners when they say that butter artificially colored should under the law be marked with the words "Artificially Colored"?

Do you pretend to believe that the legislature meant to wink at the fraud when the definition of butter, as quoted by you, was written into the statute? Is it not true that the only sensible explanation of the definition "The food product usually known as butter and which is made exclusively from milk or cream, or both, with or without common salt, and with or without coloring matter" is that the product might be colored or might be left uncolored? In either event it is still butter, and that is all that could possibly be meant by the permission given to color the product. Does your pure food law require, however, that where coloring is introduced into any food product, particularly where it is done with the intent to deceive or to make the product appear better than it really is, that the product must be labeled with the words "Artificially Colored"? At least, this is the understanding had by the federal authorities and by food commissioners of experience.

Do you by your remarks aimed at the inspected and passed act mean to condemn or make light of federal inspection of meat food products?

Do you also mean to condemn the Gould amendment to the Food and Drug Act with reference to net weight?

Are you opposed to federal control of food products?

Do you believe that the small manufacturer should have one standard for law enforcement and the large manufacturer a different and higher standard?

Are you willing that we file with the Bureau of Animal Industry and the Bureau of Chemistry the article appearing over your name in this issue of *The American Food Journal*, entitled "The Storm Breaks," and in which you take it upon yourself to attack these bureaus?

Is your article written as a state official or as an officer of the Creamerymen and Buttermakers' Association, or as the owner of a creamery? You were quoted in the *Chicago Daily Produce* of February 8 as being present at the Eau Claire meeting of a Wisconsin buttermakers' association, at which meeting the following resolution was rejected: "Resolved, That this association is in favor of a new law compelling all creameries to pasteurize all cream made into butter." Are these your sentiments?

The *National Geographic Magazine* of January, 1916, page 45, has the following to say:

"There is probably no other commodity in the American market basket that needs regulation today more than butter. The butterfat furnished to creameries comes from nearly half a million farms, and a given pound of butter may contain butterfat from a score or more of farmers' dairies. The tuberculosis germ finds butter a fine vehicle in which to travel long distances in quest of some run-down system to attack."

Is the *National Geographic Magazine* mistaken in the above statement?

Is the Bureau of Animal Industry mistaken in their various reports as to much butter being unwholesome, impure and a good conductor of disease germs?

In answering the above questions, please stick to the facts. Please do not divert from the subject as in your former statement. In your former statement, covering seven pages, you do not answer any of the questions put to the American creamery man, the National Dairy Union, or other interested associations or individuals, but the said seven pages are devoted to tirade and the calling of names which are neither polite nor convincing to the unbiased American, but indicate on the contrary that something is wrong, and a decided weakness to one's argument, if not a weakness otherwise.

Our editorials have been fair, we believe, from the very start. We have not taken up the cause of oleomargarine, nor have we more than even mentioned the name in any of these editorials. We have warned the American creamery man of trouble ahead, and from the many replies received from those in authority and those interested, we believe our warning has been timely and has been received gladly by those who are fair enough to admit the truth, and for the benefit of those, your statement is published in full as requested. Let the thinking man read the editorials and read your statement and act as the jury and enter judgment accordingly. The unanswered arguments of our editorials are in law to be taken as admitted by the other party.

You admit them by your silence.

You will permit us to call your attention to the following excerpts from dairy papers. We have thousands of such on file in this office but we merely wish to lead you in all kindness to some angle from which the light will dawn upon you.

Chicago Dairy Produce, Aug. 31, 1915:

"The only kind of butter to manufacture is honest butter. Don't load it with water, salt or curd. Make it so you can look every man in the face and tell him, if you find it advisable, to go where they don't have any snow."

N. W. Dairyman, September, 1915:

"Much of the responsibility of the butter maker rests with the producer of cream."

Butter, Cheese and Egg Journal, Dec. 8, 1915:

"We are somewhat surprised at the attitude of the American Food Journal in lending its good name to the manufacturers of oleomargarine. However, that publication is justified in this attack upon the creameries that use chemicals in cream for neutralizing the acidity, and the *Butter Cheese and Egg Journal* stands with the Food Journal, or any other individual or publication in the condemnation of that practice, and we take this stand unhesitatingly, as we feel sanguine that it has been the ruination of the quality of the bulk of American butter and so long as dope will be permitted to be used in cream, so long will the United States make a poor quality of butter and so long will the farmers receive a low price for their cream. We have often expressed the opinion that it will only be a question of time that the deodorizing processes will be tolerated, and the sooner the practice is prohibited, the sooner the creamery business will again be placed on a satisfactory and rational basis."

And what do you think, professor, of the following advertisement, appearing in the Dec. 10, 1915, issue of *Hoard's Dairyman*?

"MAKE 'JUNE' BUTTER ALL YEAR 'ROUND.

"YOU KNOW THAT RICH YELLOW COLOR THAT June butter has—it makes the butter taste better—you can't get it naturally this winter—the butter's as good but it isn't as yellow.

"June Tint butter color gives the butter that same rich but delicate yellow—makes the butter taste better—brings you better prices for it.

"JUNE TINT BUTTER COLOR,
"Monroe Drug Co., Quincy, Ill."

What is your impression of the following resolution presented in the House of Representatives on Friday, Feb. 18, by Congressman Linthicum of Maryland?

"Whereas, It is reported by the Bureau of Animal Industry that ninety-four and five-tenths per centum of the creameries of the country are insanitary to a greater or less degree; that sixty-one and five-tenths per centum of the cream used is unclean or decomposed, or both; that seventy-two and six-tenths per centum of the cream is not pasteurized, but is made into butter to be consumed in a raw state, in which state disease germs retain their virulence for a long period of time; that a large percentage of all dairy cattle are affected with tuberculosis, and that infected dairy products are among the active agents in the spread of tuberculosis, typhoid fever, and other infectious diseases; and,

"Whereas, Dairy products are the most widely used of all human foods; and,

"Whereas, Dairies and dairy products are not subject to

federal inspection, so that there is a growing sense of alarm among the consumers. Therefore, be it

"Resolved, That the Speaker of the House of Representatives appoint a committee of five members of the House, whose duty it shall be to investigate and report as speedily as practicable:

"(a) Whether conditions prevailing in dairies and dairy products seriously menace the health and property of the people of the United States;

"(b) Whether federal inspection and supervision, either alone or in co-operation with state and municipal inspection and supervision is necessary to the reasonable protection of the health and property of the citizens of the United States;

"(c) If so, then the best and most economic methods is inaugurating and enforcing such inspection and supervision.

"Second. That for the purpose of fulfilling its functions said committee is empowered to summon and examine witnesses, enforce the production of records, and to do all other things needful and lawful to accomplish its purpose.

"Resolved, further, That the expenses of said inquiry and investigation shall be paid out of the contingent fund of the House upon vouchers approved by the chairman of said committee, to be immediately available."

Professor, you are still very far from such heights as would permit you to change or alter facts by the waiving of a wand. The fact that butter is today manufactured under shameful and outrageous conditions, the fact that some of our highly respected butter manufacturers are fattening their hides on the proceeds of fraud, misrepresentation and tactics unworthy of a porch-climber, and that disease germs are packed by the millions into a tub of butter, and the fact that such butter is not food, but poison, can be denied by you, true enough, but never disproved or refuted.

You are taking a great deal upon your shoulders, professor, when you girdle your loins with the championship belt of the butter crowd. You have many battles before you and though the parting of the ways has come for you and us, on this vital issue, we shall still say to you, as Bryan said to Wilson, God bless you!

CANNOT FIX STANDARDS.

Federal Judge Anderson recently sprung a surprise on the government by ruling that prosecution under the pure food and drugs act could not be maintained on the basis of standards fixed by the Department of Agriculture because the statute itself fails to fix standards.

District Attorney Charles F. Clyne and Frederick Dickinson, in charge of food and drug law violations at Chicago, said this amounted to a nullification of section 7 of the pure food law. Section 7 prohibits reductions from the strength of foods.

As a result of the ruling Judge Anderson directed a jury to return a verdict of not guilty in a case against the Thomson & Taylor Spice Company. The case was filed on information that the company was misbranding and adulterating extract of peppermint and extract of orange.

Assistant District Attorney Dickinson offered to show by witnesses that the trade regarded circular 19, promulgated by the Department of Agriculture June 26, 1906, as the authority on standards. It was contended the products in question fell far below the standard.

Mr. Clyne said Judge Carpenter and other federal judges always have based their rulings on the standards fixed by the Department of Agriculture. The government has no appeal from Judge Anderson's ruling.

It was intimated the government may proceed with a grand jury investigation and possible indictments against food and drug houses caught violating the standards. In this way the government can bring the matter to the United States Supreme Court.

The opinion rendered by Judge Anderson comes as a climax to eight years of differences between food authorities and manufacturers of foods. Throughout the long and hard fought controversy, THE AMERICAN FOOD JOURNAL has stood uncompromisingly for the principle that the Department of Agriculture was not empowered, by nature of its office or duties, to create standards and that, therefore, prosecutions under the Pure Food and Drug Act could not be maintained on the basis of standards which had been fixed by the Department of Agriculture.

CHILD LABOR BILL UP TO SENATE.

There was much gratification shown by women interested in suffrage and child labor, when the Keating and Owen Bill providing for the regulation of the age at which children employed in mining, factories, mills or manufacturing establishments, would be permitted to labor, was passed by the House on February 2d.

The bill provides that no child under the age of sixteen years may be employed in a mine or quarry, nor that any child under the age of fourteen years may be employed in a mill, cannery, workshop, factory or manufacturing establishment; nor that any child between the ages of fourteen and sixteen years for more than eight hours each day, nor more than six days in any one week, or after the hour of seven o'clock in the evening, or before seven o'clock in the morning. It provides for adequate inspection and the authority of the Secretary of Labor, or any person authorized by him, to enter such places of employment where goods are being held for interstate commerce.

The purpose of this bill is to protect children confined for long hours at labor in unnatural surroundings, to keep them in school, to guard their health and prevent the pernicious influence usually manifest through the continuity of associations found in such employment and at the most formative period of the child's life.

During the Sixty-third Congress, second session, the Child Labor Bill was fathered in the House of Representative Mitchell Palmer of Pennsylvania. The House passed the Palmer Bill by a large vote. The bill failed to receive any consideration in the Senate on account of too much other business, and it died a natural death at the close of the session.

The supporters of the Keating Bill hope for better success this session at the hands of the Senate. The present session is expected to be a long drawn out affair, so it is almost certain consideration will be given the bill before the close. The members who opposed the bill being reported favorably, base their opposition to it on the ground that it is plainly unconstitutional. These members also advance the argument that such a law would not be a regulation, but an absolute embargo against articles sound and lawful in themselves. The supporters of the measure are convinced that a national evil of appalling extent has been shown to exist; that Federal relief only is competent to cure it; that it is in the power of Congress to administer their relief and that the bill recently passed by the House is admirably adapted to accomplish the beneficent end for which it is designed—the wiping out of a national disgrace.

Ninth Annual Convention of National Cannery and Allied Industries Is Held at Louisville—Richard Dickinson of Eureka, Ill., Elected to Presidency—Kraut and Fruit Sections Formed—Addresses and Items of Interest

THE Ninth Annual Convention of the National Cannery Association opened Monday, February 7, at Louisville, Ky., and continued until Friday evening of the same week. It was wildly estimated by enthusiasts and local reporters that five thousand people attended the convention. No such number, however, could be noted in attendance at any time during the annual gathering. It might be said conservatively that perhaps some two thousand souls made up the entire attendance.

Monday was given over to a meeting of directors of the National Cannery Association in the Leather room of the Seelbach and it was not until 8 p. m., Monday, that the opening session of the convention proper occurred. Invocation was pronounced and the usual perfunctory work incident to such occasions was gone through.

The first meeting of the convention was remarkable for the failure of both Governor Stanley of Kentucky and Mayor Buschmeyer of Louisville to keep their appointments to appear and speak at the opening session. Governor Stanley, in a telegram, pleaded pressure of business at Frankfort, while Dr. Buschmeyer was said, by the chairman, to have stepped on a tin can in the course of the day. The pun failed to rock the house and the audience now soon found itself struggling valiantly to withhold from shouting the chorus of a local product, entitled, "We can, we will, in Louisville," "sung tonight for the first time."

George N. Numsen, president of the National Cannery Association, A. F. W. St. John, president of the Canning Machinery and Supplies Association, and William H. Nicholls, president of the Canned Foods and Dried Fruit Brokers' Association, addressed the opening session.

On Tuesday morning occurred the most important meeting of the convention. Lansing B. Warner of the Cannery Exchange, Chicago, spoke on co-operative insurance as it is carried out by the Exchange. Mr. Warner's address proved both interesting and instructive and, no doubt, sowed the seed for much future good in the National Association.

Dr. H. E. Barnard, State Food Commissioner of Indiana, followed Mr. Warner with a brilliant dissertation which he termed "Food Officials Boosters, not Knockers." Dr. Barnard's address follows in full:

By Dr. H. E. Barnard

Opposite my home an old house is coming down. It was the first house built in Irvington and its builder intended it to last. So it was built carefully, slowly, with great white oak beams and massive brick walls. It was a year going up, it is being torn down in a week. Constructive work is slow—destructive work is swift. It takes time to create, but moments may undo the work of a decade, a lifetime or a century.

When food control became a function of state and federal governments there were few men trained either for the technical or executive duties of food officials. The new laws were of necessity administered by departments that hardly

knew for what they were organized. Conditions in the food supply were bad, adulteration was common, fraud was easy to detect, the people were crying for relief, newly appointed officials were zealous, reporters were eager for news, and the results of the crusades launched in the space of a few years all over the country were just what were to be expected from the conditions that made them necessary. The food industry was attacked, frequently with justice—frequently without. The Jungle, Sinclair's tale of the Chicago Stock Yards, written as a sociological study, turned out to be a first seller, and meat was banished from a million tables almost overnight. To admit that one was a butcher was in the public mind a confession of partnership with murderers, and, like Hester Prynne, every manufacturer or dealer in foods wore a scarlet letter on his breast.

I am not saying the suspicion of the consumer was not justified. In many cases it was. But the occasion soon passed. Never in industrial history did a reformation come so quickly or succeed so completely. And, I gladly say it, never again will the consumer have any need to fear that his food is of the character described in a quaint old book printed in London a century ago under the interest-compelling title, "Death in the Pot," which speaks of the bread at that time as "no longer the staff of life, but a crutch to bear us onward to the grave."

Today the state and federal food departments are under the direction of trained, conscientious executives and skilled chemists. Whenever a tale is told of vicious practices, it should be told; whenever an offender is brought to the bar of justice, that is where he belongs. Pure food legislation is sought, not as a means of relief from an intolerable situation, but because better regulation means inspired confidence in the consumer—the passing of unfair competition and better business.

The present day food official believes in the industries he supervises. He looks upon his official position as an opportunity to help the manufacturer, the distributor, the consumer, the state, to better things. And on that plank in the platform of constructive food control we take our stand.

In the trenches dug across the fields of France hundreds of thousands of men are giving up the richest lives the world has ever known in the endeavor to make it possible for succeeding generations to live better, to achieve more. But while we admire the bravery of the men in the trenches and, in the glamor that surrounds the soldier, see in him the dominant figure in the great struggle—the real doers—the vital forces, are not pointing the gun or directing the Zeppelins, they are back in the fields producing food. The poor peasant woman in her cabbage field is doing more than a dozen soldiers, the chemist who makes a war bread of equal nutritive value and less cost is worth an army corps. So long as we admire brute force that destroys, more than the constructive force that creates for the present and succeeding generations, I suppose we shall forget the peasant plodding among the cabbages and build monuments to military heroes. At any rate that has always been the rule and at present any change is not in sight.

The world is full of statues to soldiers. Where is there any

statue of Nicholas Appert? Next year, no doubt, many another bronze hero will be set astride a rearing horse as an object lesson to our children and an appreciation of valiant services to his country. When, I wonder, and where, will a statue be built of Frank Gorrell with a can of tomatoes in one hand and a can of condensed milk in the other? To Frank Gorrell, who has done more to advance the welfare of our people than all the heroes in cocked hats who strut across the pages of history.

I wonder if you see the point I am trying to make? The race moves forward only as it betters its environment, and I don't believe progress can be made by force, either by armies at war or officials in the courts. The food official has before him an opportunity almost unequalled. The health of the people depends on the way they are nourished, the prosperity of our country is but a reflection of the vigor of its citizens. Our food supply is far from adequate. It is true almost none of us go hungry to bed. Our stomachs are full—but they aren't always filled with the right things and rarely are they filled with the kind of food that furnishes the most nutrient for the least money.

Almost a third of our income is spent for food. The world counts time by its meals. It's time for breakfast—time for dinner—time for supper. Men work all day to procure food—women all day preparing it. We may think there are more important things in life than food, but there aren't. Now then, isn't it clear what the field of the official is? It is his work to secure more food, cleaner food, cheaper food, and whatever he may do to this end is in the line of duty.

I have no patience with the official who conceives his job to be the collection of license fees, or who is so zealous in suppressing the fraud of watered milk that he overlooks entirely the vital danger in dirty milk. I suppose some one must scan labels and criticize formulas, but how much more valuable is the work of the inspector who makes a good ice cream plant out of a bad one or who by wise counsel helps a grocer to turn failure into success by substituting cleanliness for carelessness.

The food industries may be easily classified. I begin with the canners, then come the meat packers, the millers, the varied dairy interests, the bakers, confectioners and bottlers. After them—the producers—come the distributors, the grocers and dealers in meat, fruit and vegetables. Not many, are there? Not a dozen. What better work can a commissioner do than to help the individual units in these great industries to get together, organize, adopt standards, learn that competitors are fine fellows, whom it does one good to know—get new ideas. Why, I'd give more for an opportunity to talk with half a dozen grocers or milkmen or canners for half an hour than for a string of police court verdicts that would fill a page in my annual report. Verdicts don't count, conferences do. Conferences build up, inspire, establish confidence. Prosecutions tear down—depress, create suspicion. It helps to scold a canner on the floor of his peeling room for faulty washing and bad sorting. I'll leave it to you to tell me what it does to the industry to drag out the sordid facts in the courtroom before a horde of insatiate reporters for a sensational press.

I believe in trade organizations. I haven't much respect for the man who does not belong to the association. Something is the matter with him. He needs watching. He's sour, and when a man is sour, how can he put out good food? No small part of my time is spent in organizing the industries which formerly were responsible to me, but to which I am now responsible. And my inspectors are no longer sample collectors or hewn-to-the-line officials; they, too, are organizers, teachers, helpers in the endeavor to produce better goods.

It is hardly necessary for me to speak of Indiana canners or the quality of the goods that leave our factories for the markets of the world. We think they are just a little better because they are made in Indiana. We know they are made of good raw material, in sanitary factories, by workmen who are trained in their duties and who are quite as earnest as we are in making their output meet the approval both of the official and the consumer.

In our endeavors to cut down the production of low grade goods we have asked our canners to spend money for many things that did not seem wholly necessary. But so sincere has been their desire to help that almost without exception all our suggestions have been carried out, with the result that in many small towns the canning factory is the only really sanitary place in the whole village. Such things count—count big. The superintendent of a model sanitary plant is proud of his business, the men and women who work there learn lessons in cleanliness that they carry to their homes. The whole community is helped. That is as it should be. The food factory has become more than a plant for making food; it has come to be a show place for visitors, an advertisement for its products and a very dominant factor in the betterment of the community in which it operates.

We are just starting a movement for better butter for Indiana. We make good butter now, but far too much of our output is firsts, when it should be extras. We shall try to show the farmer that proper care of his cream will enable the butter maker to turn out a butter worth several cents a pound more than the present product and we are showing how those several cents will go back to him. Our slogan is "Better butter pays." If by buying cream on a graded basis with a price dependent on quality as well as butter-fat we can improve the value of our butter output, we will have done something for a most important industry—something that pays both in dollars and satisfaction—the pardonable pride that in no small degree is the real reward of industry.

I am no prophet, I try not to dream dreams, but whenever I think of the possibilities for constructive work in the departments which enforce food legislation, it seems to me that we, as officials, are but on the threshold of our real careers. In many states the laws may not admit of so liberal construction that officials may do something besides police work, appropriations may be inadequate, public sentiment may be dormant. But there are always opportunities to boost, instead of knock; the finest thing that a man can do is to arouse a demand for and secure the passage of liberal and constructive legislation. And right here let me say that I pity the man in business—the association or the industry—that, either in sincerity or with selfish intent, attempts to block the onward movement of the high-powered car carrying the banner of health and sanitation.

There may have been a time, or an occasion, when it seemed to be necessary to oppose regulative legislation. I don't think a similar argument will ever be good again. The people know what they want—better food and more of it—if they think they can safeguard the food supply by additional legislation, help them to get it and make their interest your capital. But before the public speaks, before the official suggests, do without delay everything in your power to make your industry the pride of your community and the pleasure of every consumer. And while I have the opportunity to give advice before it is asked, let me suggest that you change your counsel. Take your troubles to your chemist, your bacteriologist, your expert technologist, not to your lawyer. If all the money you have poured out for bad legal advice were now available for advertising canned goods there wouldn't be any chance to worry over surplus goods. You couldn't pack enough peas, corn or tomatoes to go once around and you wouldn't need any South American output for your surplus.

In closing, may I say this, the food official of today is usually intelligent, fairly well trained, surrounded by expert advisers and supported by a corps of competent inspectors. He wants to serve the public well, he also wants to help you. If he criticizes he does so with good intent—when he praises it is usually because he tries to give merit its due.

Get behind him. Make him your welcome guest at your factory—your legal adviser in questions of food law—your counsellor in your attempts to make better goods, to open a new market, to improve conditions in the community you support. Forget he is an official. Remember, he is your staunchest friend and sincerest booster.

Dr. Barnard's address was met with much genuine applause. W. F. Bode spoke next, summarizing the work done by the

National Wholesale Grocers' Association, which he was representing at the convention, and predicting much good from the continued co-operation between canners and jobbers.

Dr. William Frear spoke somewhat briefly on "Principles of Standardization." Dr. Frear is a member of the committee on definitions and standards and his address very naturally carried the weight of authority. He said:

By Dr. William Frear

The subject your program committee has assigned to me is entirely too high-sounding and too broad to fit the simple talk I have to make. All I purpose at this time is to state the reason for the attempt to erect a food standards system and to sketch the outlines of a few of the foundation stones of the system.

Every sale has two principal elements, getting and giving. To the average man, buying is not merely a simple device for getting rid of money. He expects to receive for his cash something more important to him, in one way or another, than the money is. Without such expectation, he would not buy. If he receives more than he expected, he expands his chest, goes promptly home and makes clear to his wife how great a man she has married. If, on the other hand, he receives less than he expected, his action is uncertain as to detail: He may "have it out," at the moment of the discovery if the seller is present; he will certainly not brag about it, but he surely will remember it with the determination, if he is combative, to have retributive justice; and if he is not combative, he vows he will not "be done" twice in the same way by the same person.

Now that barter has almost disappeared, and counterfeiting skill is so much discouraged, and wares are delivered in beautiful packages under the rule of "absolutely no goods exchanged," it is much easier for the seller to tell, at the time of sale, whether he is getting the price he asked, than it is for the buyer to tell whether he is getting the kind and amount of goods expected.

The possibilities of misunderstanding also are much greater in the case of the goods than of the money. Dollars and cents are definite things, each of absolutely equal value with others of the same denomination. This is not true of peas, beans, salmon, oysters and other commodities. Of things sold under the same name as to kind, one may be worth many times more than another.

A man building a house knows that this name applies equally to a "humble cot" and to a "palatial mansion." So, if he is of limited means, he proceeds to hold his architect down and to keep his building contractor up. He insists upon specifications and plans showing just what materials are to be used and how they are to be arranged to make his home.

In large deals, in general, commodities are bought upon specifications, by analysis, or under the rules of whatever exchange deals with the commodity concerned.

For food products, however, there is no complete, expressed system of specifications. "Peas is peas" just as truly as "pigs is pigs." Whatever symbolism guides the buyer and seller in deals between producer and distributor, little of it is understood by the ultimate consumer to help him in dealing with the retailer.

That a sensible system of specifications corresponding to the principal food names would be serviceable, can hardly be disputed, whatever the differences of opinion might be as to the number of buyers who would master it, or even refer to it.

The highest need for such a system appeared, however, with the enactment of numerous food laws, state and national, of essentially the same type. These laws make adulteration and misdemeanors punishable by fine, imprisonment, and, sometimes, by confiscation. They define adulteration in effect as the impoverishment or dilution of a normal food substance, the addition to it of injurious substances, its coating for concealment of inferiority, its sale when it is contaminated or

decomposed, and the substitution of something else for it. Misbranding is essentially a like misrepresentation of any kind. Nowhere do these laws define the normals, departures from or misrepresentations of which constitute the statutory offense. The prime responsibility of decision as to what is the normal corresponding to a food name devolves upon the officer assigned the duty of securing the law's enforcement. He, in turn, transfers his responsibility as to this particular to his food experts.

If the experts of different states disagree as to food name meanings, confusion sets in, even though the laws are identical, and everybody is hurt. If they agree, the most important step toward the securing of the oft-prayed-for "uniformity in food laws" will have been taken.

The organization of these experts for the formulation of a system of so-called "food standards" has as its mainspring this need for agreement between food executives and their experts. Corollary to it was the desire to promote the attainment of a more perfect understanding between buyer and seller, and between these and the officers of the law.

Some theorists have held that the food standard should represent, in each case, the paragon of excellence, thinking that thereby the general level of quality of the product would be raised. The standards maker remembers, however, that the prime use of these standards is in the enforcement of quasi-criminal laws. If he adopted the theory just mentioned, and the courts followed, all food producers and sellers would be fined or go to jail. The same results would follow if the average of quality were the thing he expressed; it would also follow, that at least half of the good food of the land would be subject to condemnation and destruction.

The job calls for common sense. It consists in finding, as nearly as may be, what the ordinary buyer and seller understand each food name to mean, and what lowest grade and quality could be regarded as acceptable without the buyer and his friends thinking that he has been unjustly used; and then in expressing this finding in terms most suitable for the serviceableness of the standard. For the standard must fit the laws under which it is to be applied.

The result of these conditions is that the standards are to be quite definite as to the kind of commodity, but, where they deal with quality, include much that is very inferior. In other words, the conditions require a system of what is called "minimum standards."

What is the effect of such standards upon the average of quality of the goods represented? The general opinion is that the maker feels safe in lowering the average of excellence, and does this. Where, for example, a low standard of milk fat is made legal for milk, it is very often observed that the immediate effect is, while cutting off the very poorest supply, to lower the average richness of the market milk, instead of raising it, as we should expect if we were dealing with arithmetic uninfluenced by greed.

I admit that this view of immediate effect may be correct. But I doubt the permanence of such effect. Many buyers prize quality and will pay for it if they must to get it. This motive will do its work, statute or no statute.

I have already stated the necessary ill effects which must follow the attempt to use any but minimum standards under our present laws. There is, however, another alternative, namely, the establishing of minimum standards for grades within each kind of food commodity.

The use of grade names representing one sort of excellence or another, has been widely, though by no means universally practiced. While the food law executive has no authority to require the use of grade names, he has the same degree of responsibility for determining their meaning when they are used, as he has for determining the meaning of the names of a food kind, and it is likewise his present duty to see that the grade names used shall not be misleading.

When the work of making an American system of food standards began in 1898, it was planned that grade standards should be formulated as well as those for the distinct kinds of food products; but those for classes and kinds naturally

received first attention. Now the work has progressed far enough and the demand is sufficient to warrant the beginning of this difficult task.

I mention the fact of difficulty, first, because I know this audience knows something of this phase of my subject; and, second, in order that I may make it entirely clear that the gentleness charged by their associates with the responsibility for this task, realize the need for all the co-operation the producers and distributors of foods can give them.

Since I have already stated the limits of power to food executives by present laws, I trust that I may add, without danger of the charge of desiring to usurp legislative powers, that I firmly believe that there is an economic law favoring the use of grade names. Such use is not all to the benefit of the buyer, and to the disadvantage of the seller. The time allotted me will not permit the full statement of the reasons for my belief, but the history of the standardizing of the farm or orchard products of a community is that such standardizing has increased demand and improved price—I mean net returns, not simply the prices received for the best products. I believe this effect is due more to the buyers' certainty as to what he will get than to the greater average excellence of the product.

But what will be done with the lower grades? To waste a fit food is an economic sin, even in this land of plenty, but under the grade system the poorer grades, as well as the more excellent, find their best use, the buyer and seller are least in danger of misunderstanding, and the best product tends to find its natural price level—provided, always, that the grading is not carried to a refinement past the common understanding.

Dr. E. E. Pratt, chief of the Bureau of Foreign and Domestic Commerce, Washington, D. C., sent a lengthy paper on "Development of Foreign Trade," which was read before the convention. He called attention to the fact that the foreign trade in American canned goods is insignificant when compared to the size of the industry in this country. The total output of American canneries was valued at \$192,396,000 in 1909, and probably amounted to \$250,000,000 in 1914, but the exports for the last year before the war amounted to only \$18,350,000.

"It is the universal verdict of those who have studied conditions on the ground," said Dr. Pratt, "that American canned goods compare favorably with those of other countries so far as quality of the goods and attractiveness of the containers are concerned. In many cases, however, the foreign goods have a slight advantage in price." Turning to the high tariffs against canned goods in many countries, Dr. Pratt asserted that as soon as foreign peoples had been educated up to the wholesomeness of canned foods, "there is no doubt that the tariff restrictions that now exist would be removed. This point has been especially emphasized by the salmon canners in their efforts to increase trade in South America."

"Our foreign trade in canned goods can be considerably increased if we are willing to go in for the business," said Dr. Pratt, "and there is the crux of the whole matter. American manufacturers are apt to be reluctant. They are apt to hang back; they are apt to ask for some sort of a support to lean on; they are apt to wait until some one else breaks the ground. Let me suggest that our own usual, accepted, and successful business methods are equal to the occasion. Apply them and our export trade in canned goods will grow by leaps and bounds."

J. H. McLaurin, president of the Southern Wholesale Grocers' Association, who was scheduled to speak at this session, was prevented from attending the convention.

"Laboratories of the National Canners' Association," by Dr. W. D. Bigelow, chief chemist of the association, proved highly instructive. Dr. Bigelow's address follows:

By Dr. W. D. Bigelow

The attention of the laboratories of the National Canners' Association is devoted largely to a study of the conditions attending the preparation of canned foods. An effort is made to define as accurately as possible the conditions giving the best results. Problems and difficulties of a general nature are studied with a view to learning their cause and finding a remedy. The various operations of canning, such as blanching, preheating, exhausting, processing and cooling are studied, taking into consideration different methods of closing and different fills in the cans.

The laboratory also gives attention to many individual problems that come from members of the association. For these problems a charge is made which barely covers the time and chemicals employed in the work. It does not include the time occupied in supervising the work or in consultation and correspondence.

I will discuss briefly this morning some of our typical general problems as well as the character of our special problems of commercial nature.

Our chief study this year is the tin plate employed for making cans. A large experimental pack was put up in 1910, 1911 and 1912 to study the influence of weight of coating on the amount of tin dissolved by the contents of the can. The work on this pack was of great value, but before it was entirely completed other questions arose requiring for their solution a new pack put up under more carefully controlled conditions and on a larger scale than ever before.

It is the belief of some canners that the weight of the tin coating on the plate is not as high as it should be. From time to time, letters are received from members of the National Canners' Association sending samples of cans with the request that they be examined and the correspondent informed whether they are proper to use with the product he is canning. It is obviously difficult to answer a question of this sort from the examination of a small number of cans. In the present knowledge of the art it is impossible to produce a sheet of tin plate on which the coating is uniform.

Aside from this difficulty, however, we were unable to give correspondents as much information on this question as we felt they had a right to expect. Even assuming that the samples sent were representative, we were unable to tell whether the amount of coating was sufficient to make the cans satisfactory for the article which they intended to pack. The determination of the weight of tin coating is a simple matter, but we had not the data which would enable us to interpret our analytical results in terms that would give the canner the information he needed. This data could only be secured by a very large experimental pack which would entail a larger number of analyses than had ever been contemplated before.

A year ago the question crystallized into a more definite form: What weight of coating should be carried by the grade of tin plate commercially known as "coke"—the grade used for the great majority of canned foods? To solve this question a committee was selected from representatives of the laboratory of the National Canners' Association, the laboratories of plate manufacturers and can manufacturers and other experts, and work was begun immediately in the preparation of an experimental pack which is expected to answer the question effectually. I will not go into the details of this investigation now. The matter was covered in the report made some weeks ago to the executive committee of the National Canners' Association and has been published in the trade papers.

I will say, however, that our study includes, among other things, the amount of iron taken up by the food from cans prepared from plate with varying thickness of tin coating. When we consider how much labor and expense have been devoted to the study of tin plate, it is surprising that sufficient importance has never been attached to the amount of iron taken up by the food. We lost sight of the fact that the real reason for coating the steel plate with tin is to protect the

food from contamination with iron. Iron is not injurious to health. Even if the steel plate were not coated at all, the amount of iron that would go into solution would be very slight indeed when expressed on a percentage basis. There is no question of hygiene or public health involved. The taste of iron compounds, however, is exceedingly astringent. As stated in our bulletin No. 2, this accounts for the metallic taste sometimes found in certain canned foods which is often spoken of as a "tin" taste. Such a flavor is obviously objectionable to the consumer and should be guarded against as much as possible. Again, under some circumstances, iron may cause an undesirable color which detracts from the appearance of the product. It is important then to know whether there is a relation between the weight of tin coating on the plate and the amount of iron dissolved from the can by various foods. This information will help us decide the character of plate which should be employed.

Milk.—A year ago we completed our study of the methods employed for the examination of evaporated and condensed milk. The work was done at the request of the milk section. The experience of milk condensers with chemical laboratories was very unsatisfactory. When duplicate samples were sent to two laboratories, the reports of the percentage of fat often varied by over one-half per cent. The discrepancy in the determination of solids was not so great, but it was entirely too great for satisfactory work. The laboratory of the National Canners' Association made a careful study of the various methods available and suggested those which appeared to give the most satisfactory results.

It was found that the methods employed by most of the manufacturers were inaccurate and on that account some of them were placing on the market milk which was substantially lower in fat than they thought. The milk of several was below the standard of the government, although their own factory results showed it to be well above that standard. The work of the past year has confirmed the wisdom of the methods suggested and one of the worries of the milk condensers has been removed. The per cent of fat in evaporated and condensed milk can now be determined very accurately and there is no longer any excuse for discrepancies between laboratories in this determination.

Corn.—A year ago at the meeting of the corn section, we called attention to a dark color sometimes appearing throughout the mass of canned corn. The color was found to be due to a minute trace of copper—from one ten-thousandth to three ten-thousandths of one per cent. This amount is so small that a food laboratory testing the sample for copper would report it absent or present only in a negligible trace. Yet the coloring matter formed on processing the corn was so intense that the corn was unmerchantable, though not at all injurious to health. Corn of this description was found in the pack of several canners who did not know of the difficulty. Others found enough of it in their pack to cause considerable loss. The cause of the difficulty having been explained, the remedy was obvious. In visiting canneries during the past season, it is a satisfaction to note how generally the packers have followed the suggestions made in bulletin No. 6 with respect to tinning their cookers.

At the close of the season of 1914 considerable anxiety developed among some corn packers regarding a black color that appears in patches on the surface of the tin plate and sometimes extends into the corn. This color has been known to some for a number of years and probably always existed more or less. Many packers, however, insist that it was a new difficulty and developed first during the year 1914. It seems probable that it was much worse in some packs during that year than previously. At the same time, the fact that it was observed then to a greater extent than before was probably due in large part to the increasing care of consumers and especially of jobbers in the inspection of foods. The foods themselves and the packages containing them are much more carefully scrutinized than ever before, and an unusual appearance which formerly would have been overlooked is now regarded with disfavor.

The black substance referred to has been found to consist of very finely divided iron sulphide, diffused in a clot of the

corn material. The amount of iron sulphide present is enormously less than the appearance of the clot would indicate. The substance is not at all injurious to health and no objection could be made to it except from the standpoint of the appearance it gives the can and product. Unfortunately the difficulty was not appreciated until the close of the season and there was no opportunity to study it during the year 1914. It was given as much attention as possible during the following winter, but we went into the season of 1915 without understanding the conditions under which the color was produced or having a remedy in mind. A great deal of attention was given to it during the entire canning season of 1915. A large number of experimental packs were put up in different sections of the country and much time and expense were devoted to the question. On the whole the results were gratifying.

The black substance appears to form in two stages:

1. The corn corrodes the portion of the can with which it comes in contact during processing.

2. When the can is stacked in the storeroom, hydrogen sulphide (always formed in slight amount when food is cooked) combines with iron in some portion of the can which has been corroded during processing.

Iron sulphide does not form to any appreciable extent without this preliminary corrosion. If the can is processed and stacked exactly in the same position, therefore, the black substance does not often form on the portion of the can above the corn; that is, next to the air space. This is probably because that portion of the can has not been corroded during processing. On the other hand, if the can is stored in a different position from that in which it is processed, a portion of the can which was below the surface of the corn during processing and hence somewhat corroded is turned above the surface of the corn and forms the roof of the air space. This affords the condition which appears to be necessary for the formation of the black substance. This substance is formed within the first few days after processing. Iron sulphide will not form in even such a slightly acid medium as corn. It, therefore, can not form on the plate which is in contact with the corn because of the acidity of the latter.

In some experimental runs, hole and cap cans of corn were punctured next to the rim after sealing, filling entirely full with brine and again tipped. Such cans did not form the black substance mentioned in any case, although duplicate cans taken from the line at the same time and not filled with brine in this manner did form it in considerable quantity. Sanitary cans filled entirely full of corn were free from the difficulty. The color appeared to form only in the first few days of storage. Cans turned upside down after having been stored ten days or two weeks did not form color in the new air space. The black substance cakes more or less after standing several months, but seems to disappear very slowly when the position of the can is changed. If the corn is not too stiff, the black substance is disintegrated more or less in shaking and then dissolves in the corn. The black substance is not at all injurious to health. It is the combination of two substances normally present and can only form under certain conditions which have no influence on the wholesomeness or quality of the corn. It should be borne in mind that this iron sulphide is present only in infinitesimal traces. It is only visible at all because of its fine subdivision and intensely black color. When this substance is dissolved in the corn it is decomposed into traces of soluble iron compounds and hydrogen sulphide. It appears that these two substances can not recombine. When this black substance dissolves in the corn, therefore, it is just the same as if it had not been formed. As I have already stated, the chemistry of this problem is not entirely understood and for that reason we are not in a position to make suggestions without reservation regarding its elimination. At the same time, the results of numerous experimental packs are in such close agreement that it seems proper at this time to make the following tentative suggestions for the pack of the present year:

HOLE AND CAP CANS.

(1) Fill as full as possible.

(2) Do not pack too thick. Thick corn forms more black and is harder to shake satisfactorily.

- (3) Stack solid in retort crate, cap up.
- (4) Cool thoroughly. Only enough heat should be left in the corn to dry the can without rusting.
- (5) Stack cap up in storeroom instead of on the side, as is the usual practice. The cans should be kept in this position at least two weeks. After this they may be stacked on the side if desired.
- (6) Always shake before shipping.

SANITARY CANS.

- (1) Keep cooker below 180°.
- (2) Fill the can as full as possible. No head space is required. Experimental packs indicate that black is never formed in the absence of head space.
- (3) Cool thoroughly as in hole and cap cans. Only sufficient heat should be left to permit the cans to dry.
- (4) Shake before shipping.

If the can be packed entirely full—practically without head space—the position in which it is stacked is immaterial. This, however, is not always practicable. Some double seamers will not close a can entirely full. Again, for obvious reasons, many packers of standard corn will be unable to give a better fill with sanitary cans than can be done with hole and cap cans. If the sanitary can is not filled entirely full, less black appears to be formed when processed and stored on end (the same end up) than when stacked on the side, but the difference seems to be less than with the hole and cap can. This may be, in part at least, because of the drawing of the ends of sanitary cans in making expansion rings. Again all black formed in the end of the sanitary can is conspicuous, whereas with the hole and cap can a small amount of black is made less conspicuous by the char produced in sealing the can. When head space is left in the sanitary can, therefore, it is still a question whether the can should be stacked on end or on the side.

Tomatoes.—A good deal of work has been done with tomatoes during the last two years. Some of the local canners associations have been very earnest in their attempt to discourage the practice of a few canners in adding water to tomatoes. The Bureau of Chemistry has also expressed its displeasure with this fraud and has brought prosecution against some canners who practiced it. The sentiment of tomato packers is practically a unit against this practice, but many of them fear an error in the determination of added water. It is their experience that after a heavy rainfall, tomatoes are much more sloppy and that the juice separates from them in greater quantity on the peelers' tables and during the processing and shipment of the goods. They regard this amount of juice as an indication that the heavy rainfall has increased the water content of the tomatoes. The question was undoubtedly serious and worthy of investigation.

Accordingly, during the last two years, the laboratory has studied the tomatoes as they ripened on certain plants set aside for us at the Arlington Experimental Farm of the Bureau of Plant Industry, United States Department of Agriculture, and the Maryland Experiment Station. These farms are both within a few miles of Washington and a representative of the laboratory visited them and secured the samples as they ripened. The work extended throughout the ripening season of the tomatoes. During the same period the rainfall records were available from observation stations on the farms on which the tomatoes were grown. The climatic condition of the two seasons were not what we desired. We had hoped for a heavy rainfall preceded and followed by protracted droughts. This we did not find in either season. At the same time, the results obtained are of great interest and we feel safe in assuring packers that they may dismiss the fear that tomatoes packed after a heavy rain may be mistaken by chemists for watered stock. Tomatoes taken after a heavy rain do not contain more water than those grown during the normal period of rainfall. It should be stated here that the chemist judges the amount of water from the amount of solids (such as sugar and acid) in solution in the juice and not from the amount of free juice.

In this connection there is a matter to which I wish to call your special attention. A few cases have come to our notice

of water being added unintentionally or thoughtlessly in the canning of tomatoes. In one case, live steam was run into the hopper of the filler for the purpose of preheating the tomatoes and thus saving exhaust. Of course, the steam condensed on the cold tomatoes, resulting in the addition of water. In other cases the buckets from the peelers' tables were emptied into a colander and from there pushed into the hopper of the filler. The separated juice was run into a tank, where it was heated and then by means of a siruping machine added to the cans as they left the filler. When this method is employed, it is important that the juice be heated with a coil or in a jacketed kettle. If heated by means of an open steam pipe, a considerable amount of water is likely to condense, thus diluting the juice, and a chemist examining the product will report the addition of water.

Waste Products.—A considerable number of cannery waste products have been collected from time to time and examined in the laboratory. From the composition of these products we will estimate their value as nearly as we can with a view to suggesting whether they can be disposed of more economically than is done at the present time or whether in some cases they may actually be made a source of profit. This is a question of considerable importance. The volume of waste products about a cannery is enormous, and a large expense is involved in their disposal. Moreover, their immediate removal is of the utmost importance to maintain the plant in a proper sanitary condition. The disposal of waste products is not a new subject for discussion. A great deal has been said about it that is worthy of attention. On the other hand, very much has been said without mature deliberation. Many people in seeing a large amount of refuse hauled away from a cannery have commented on the great loss involved in throwing away such products. Some have had the products analyzed and have calculated their value—thus estimating the fortunes that were being thrown away because the products were not used.

The subject is undoubtedly important and well worthy of study. It seems probable that in many cases this refuse can be handled in such a way as to at least reduce the cost of its disposal. In some cases it may even be made a source of profit. The waste is not so great, however, as is believed by many. The average canner has all he can do when his plant is in operation. He has not the resources or the organization to prepare his waste products in such a form that they can be placed on the market. He has not time to devise a system for the recovery of waste products or to create a demand for them. Many of these waste products are of value for feed. Some of them, such as pea vines and corn husks and cobs, are usually employed for that purpose. They can be made still more valuable by drying. Whether the increased cost and trouble of drying them will be repaid by this increase in value remains to be demonstrated. The question needs more efficient engineering than has been applied to it thus far. We are all watching with interest the experimental work in this field which is being conducted by a manufacturer of drying machinery.

There are other waste products of the canning industry which are of value for feed, but which can not be preserved in silos like those just mentioned. Again, many of these products are of more or less value as fertilizers. From their analysis, we can compare them with articles now used for feed or fertilizers, and thus form an approximate idea of their value. We can also tell very closely the cost of converting them into a form in which they can be preserved, as, for instance, by drying. In this manner we can secure data that will make possible intelligent commercial experiments in the disposal of waste products.

We must bear in mind that for the present, at least, the hauling away and discarding of such products is not necessarily waste. In some cases the cost of saving a product may be greater than its value. Conservation consists in saving a product that can be saved economically—not in spending more than it is worth for its recovery. This has been lost sight of too much in the discussion of this question.

Water.—The laboratory has made considerable progress in the study of water intended for cannery purposes. The sub-

ject presents many angles, and, like that of waste products, has often been discussed in a superficial way. We hear a great deal in these days about water for boiler purposes. The subject has been thoroughly investigated and is well understood. There are a number of systems for the purification of water and there are firms who make that their business. This is long past the experimental stage. It is now a question of engineering. A system adapted to a given plant can be calculated with certainty. There are boiler compounds almost without number. Some of them are of value when used under conditions to which they are adapted.

It is universally admitted that the scale formed by hard water in boiler tubes greatly lessens the efficiency of the boiler and increases the fuel consumption and the cost of making steam. It is also well known that the purification of some waters will greatly lessen the wear and tear on boilers. Many manufacturing concerns have materially reduced their cost by putting in efficient systems for the purification of water. The problem applies to canners as much as to other manufacturers.

At the same time the installation of a softening system in a factory is not necessarily economical. Under some circumstances it is cheaper to renew boiler tubes than to purify water. It may be cheaper to blow the boiler out from time to time and to allow the scale to collect until there is an opportunity to clean the tubes. It all depends on local conditions, on the character and abundance of the water supply, cost of fuel, size of plant and length of season. Considering the brief duration of the canning season, many canners, especially those with small plants, would find a softening system an expense rather than a saving. This question must be considered for each plant individually.

Again, a great deal has been said regarding the softening of water for general cannery uses, such as blanching vegetables and in the preparation of brine or sirup. Water with a high magnesium content is objectionable for brine because of its bitter taste, but fortunately the magnesium water regions, as far as we know them, are not located in canning districts. Even our hard waters of the middle west do not contain enough magnesium to give a bitter flavor to products prepared with them.

It is generally believed that hard water has a toughening effect on certain vegetables, especially peas, beans and corn. Bartow and Huenink, in work done a year ago at the University of Illinois, showed this to be true of mature vegetables, such as baked beans and soaked peas. We can not find any such effect, however, on the ordinary green products, even of the larger sizes.

During the last two years, we have put up several experimental packs of peas, string beans and corn of different degrees of maturity. This work was done in Ohio, Illinois, New York and Maryland. In no case were we able to detect any toughening effect on the vegetables from the use of hard water. Even when we used waters of much greater hardness than is found in any canning region of our acquaintance, the vegetables blanched and brined with it appeared to be no tougher than when blanched and brined with softened water or even with distilled water. I feel, therefore, that our fears in this respect may be dismissed as groundless.

As I have already stated, the question of hard water for cannery purposes presents many angles. We have not completed the study. There are other questions involved than the toughening of certain vegetables of which I have spoken. It is believed, for instance, that water with a temporary hardness may produce turbidity in the liquor. This is a question with which we have done some work, but we are not ready to make a definite statement regarding it.

Salt.—Compounds of calcium and magnesium, to which the hardness of water is due, are also found in common salt. The standard of the United States Department of Agriculture limits the amount of these bodies which salt shall contain to 1.4 per cent of calcium sulphate and 0.5 per cent of calcium and magnesium chloride. When these figures are reduced to parts per million, which is the ordinary basis for the results of water analysis, they look much larger. For instance, when salt which just complies with the federal

standard, referred to above, is dissolved in distilled water so as to produce a 2 per cent brine (16.7 pounds of salt per hundred gallons), the hardness of the resulting brine may be over 17 degrees German. The water in shallow wells (not more than 100 feet deep) in Ohio, Illinois and Indiana is of approximately the same hardness.

Manufacturers of high-grade dairy and table salt have accepted the general belief that the calcium and magnesium compounds have a toughening effect on vegetables. It is not uncommon for them to advertise their salt as being valuable for canners on the ground that its low content of calcium and magnesium will permit peas to remain more tender than any other salt. This question goes hand in hand with that of hard water and canners will do well to dismiss it from their minds. They should insist, however, that their salt comply with the federal standard. Only the high-grade brands of dairy and table salt comply with this standard and canners will doubtless continue to use them.

Commercial Work.—At the last meeting of the association a resolution was adopted asking that the laboratories be equipped for a larger volume of this work than had been handled before. The desire of the association has been complied with in this respect. During the last year the laboratories have handled all of the work that has come in. For this work, as I have already stated, a charge is made which barely covers the cost to the laboratory of the time of the analyst and the reagents employed.

Perhaps a few words will be of interest regarding the classes of samples we are receiving. A great many samples of tomato pulp have been received—probably more than of any other description. These samples are almost all sent for the purpose of ascertaining whether they comply with the government requirements. In order to determine this, we employ the method of the Bureau of Chemistry. One of our analysts has visited the bureau from time to time and worked with Mr. Howard, who originated the method and has charge of the work in that bureau, and we are confident that the results of the laboratory check very closely those which the Bureau of Chemistry would obtain on the same samples. The purpose of the method is not entirely understood by manufacturers of pulp. I shall, therefore, give, in some detail, what I understand to be the attitude of the Bureau of Chemistry in the matter. This statement is not intended as a criticism of the method, or as an expression of personal opinion, except in so far as our ability to check the results of the bureau on identical samples is concerned.

It is not the idea of the Bureau of Chemistry that pulp shipped in interstate commerce should contain less than a certain number of bacteria, molds, or yeasts and spores. They take the microscopic count as a measure of the sanitary condition of the plant and the thoroughness with which the tomatoes have been sorted and washed. They hold that the raw material from which this pulp is manufactured should be sorted by hand and decayed or partially decayed fruit removed.

It will not answer for a few sorters to pick over the fruit in the basket or in a pile on the peeling table. It can only be done on a moving belt where the tomatoes rest in a single layer and are not too close together. The belt should move slowly, so that the tomatoes can be seen readily. The sorters must be in sufficient number and must be chosen for their ability to pick out decaying fruit. Much better results are obtained if the tomatoes are turned over so that all sides can be seen. One packer has suspended above the belt a transverse row of one-inch iron pipes about a foot long, hung from a wire passing through them at the top. These pipes strike every tomato as it passes under them and turn most of them over. Sorters are stationed before and after the row of pipes.

A manufacturer of pulp can determine whether his products are being sorted properly by going to the sorting belt from time to time and seeing how the work is done, or by taking a basket of tomatoes at random from the belt from time to time and seeing how many decaying fruits have passed the sorters. That is the way the government expects him to check the efficiency of his work. The government contends

that a high mold count by the Howard method is an indication that this sorting has not been properly done, or that the plant is not kept clean.

Manufacturers of ketchup and baked beans frequently send to the laboratory samples of pulp offered them and samples of deliveries. When these samples are examined, there is sometimes found a remarkable lack of uniformity in the microscopic count of different cans of the same shipment. This lack of uniformity is believed to be evidence of improper sorting or improper manufacture. If the tomatoes are all carefully sorted and washed, the plant maintained in sanitary condition and the pulp made promptly, the microscopic count should be reasonably uniform. If the sorting is not properly done, the count must vary.

It is well known that tomatoes received at the packing house contain more rotting fruit on some days than others—more in some wagon loads than others. If the sorting is not very carefully done, therefore, it is obvious that at some times a great many more decaying tomatoes will pass the sorters than at other times. When the tomatoes are in first-class condition, the sorters find very few to take out. The microscopic count is, therefore, very low at such a time. It would be low if there were no sorters at all. When the tomatoes are in a bad condition, the microscopic count must necessarily be high if the sorting is not very carefully done. On this account, where the sorting is not well done, there is a great lack of uniformity between different runs of pulp. Two batches manufactured on the same day may have a widely different mold count.

The various batches are not kept separate in the store-room and there must necessarily be a large number of batches in a shipment of considerable size. Now, if the tomatoes have not been properly sorted the microscopic count of these various batches will not be uniform. Several cans drawn as a sample of a carload may represent as many batches and their mold may vary from 30 to 100 per cent of the fields.

Failure to appreciate this has led to a great deal of uncertainty and dissatisfaction among both buyers and sellers of pulp. They sometimes take these apparent discrepancies as evidence that the method or the laboratory is untrustworthy. The trouble is with the sorting and washing of the tomatoes and the cleanliness of the factory machinery. Where these are right the batches are sufficiently uniform so that we have no difficulty in judging a shipment of pulp from a sample submitted.

Some packers find a laboratory examination to be valuable as a check on their factory operations. They believe that the psychological effect upon superintendent and sorters is good. If they look on the laboratory report, however, for any other reason than its psychological effect, it is useless to depend on one sample a day or two or three samples a day, as is the custom of some plants. The only safe plan would be to keep the various lots separate and have a sample examined from every kettle or evaporating tank.

At best, however, the value of a method of this kind is only indirect. The only safe plan is to have a careful and efficient superintendent of sorters, and enough sorters to properly remove all tomatoes that have begun to decay. This is especially important with trimming stock pulp, and pulp manufactured largely from broken tomatoes and fragments of tomatoes left on the belt by the peelers. The mold count of such stock is high and irregular at best. Peelers can not be depended on to separate decaying portions of tomatoes from the remainder of the peelings. The decay of tomatoes begins at the outside, and practically all of the decaying material which passes the sorters remains with the peelings. If pulp is to be made from trimming stock, therefore, the sorting must be especially careful. Pulp with a low count in molds, bacteria and yeasts and spores can be made from trimming stock, but the cost of making it is relatively high because of the cost of sorting all of the tomatoes at the plant with the requisite degree of care. Whether trimming stock pulp that will comply with the government requirements can be made with profit is a serious question.

Spoilage.—We have done a great deal of work in the last year in investigating causes of spoilage. Sometimes they

were difficult to understand, but in very many cases the cause was clear cut and unmistakable. The sanitary can has now reached a degree of perfection, which is a surprise to many—but it is not fool-proof. It requires intelligent handling. An empty can should be put through the sealing machine from time to time and cut to see that the seam is right. Whether working with sanitary or hole and cap cans, precaution should be taken that in case of a breakdown cans between the filling machine and the sealing machine shall be taken out and not allowed to go through the sealing machine cold or partially cooled. The further we investigate the cause of spoilage and deterioration of various kinds, the more we are impressed with the importance of a good fill, adequate exhaust, prompt sealing with the contents of the can at as high a temperature as the article will permit, a safe process and adequate cooling. Lack of precaution in any of these details may lead to difficulty.

Miscellaneous Questions.—Most of the inquiries received at the laboratory concern the subjects I have mentioned. There is a wide range of subjects, however, regarding which inquiries are occasionally made. Frequently, these inquiries are accompanied by samples—sometimes they are not. When samples are sent with a statement of all the details the packer can give of the method of preparation, we are frequently able to suggest the cause of the trouble from the statement of the packer and the appearance of the sample. In such a case, no charge is made. Frequently it is necessary to examine the sample in the laboratory. Usually the difficulty is one we have met before and often we can suggest the cause and how it may be prevented in the future. Sometimes the question is new to us, and suggests the need of a line of investigation which had not come to our attention. Sometimes it affords new light on a question we have under investigation.

Our study of hard water and salt was suggested by inquiries of members of the association. Soon after the laboratory started, a canner sent us samples of his corn asking the cause of the dark color which characterized occasional cans of his pack. We could not answer his question then, but made it a subject of study during the following canning season. This study enabled us to answer the same question when it came to us from several other packers and to help them stop a very material loss from this source. It also led to the discovery of the same condition in other plants where it had not been noted. Again, the occurrence of iron sulphide in patches on the inside of the container and sometimes extending into the contents of the can was brought to our attention by requests for help. Many such illustrations might be given. For this reason commercial work is of value to the laboratory in keeping us informed of the various kinds of manufacturing difficulties, as they arise in the factory.

Correspondence with the members of the association is welcomed and all inquiries receive promptly as full replies as we can give.

The report of the committee on nominations was now heard and the election of officers for the ensuing year followed. The report of the committee, which follows below, was voted on and approved, after having been read before the convention.

REPORT OF COMMITTEE ON NOMINATIONS.

Mr. Frank Gerber—To the president and board of directors of the National Canners' Association: Your nominating committee, consisting of Messrs. Frank Gerber, chairman, Fremont, Mich.; George E. Stocking, Rochelle, Ill.; Walter M. Wright, Choptank, Md.; Dr. H. L. Hutto, Sharpsville, Ind.; A. D. Weller, Oak Harbor, Ohio; Mr. J. A. Hageman, Fort Atkinson, Wis.; Mr. M. H. Hegerle, St. Bonifacius, Minn.; George Kelley, Grinnell, Iowa; E. A. Kerr, Baltimore, Md.; H. L. Cannon, Bridgeville, Del.; F. D. Bolton, Fincastle, Va.; R. S. Fogg, Fincastle, Va.; C. H. Bentley, San Francisco, Cal.; George B. Morrill, Portland, Me.; J. F. Rourke, Grand Island, Neb.; R. B. Gillette, Marionville, Mo.; L. A. Sears, Hart, Mich.; W. C. Leitsch, Columbus, Wis.; Mr. H. L. Herrington, Ogden, Utah, met at Louisville, Ky., on this 8th day of February, 1916, and concluded upon the following

list of nominations for officers and directors to serve during the ensuing year.

Your committee finds great satisfaction in proposing the name of Mr. Richard Dickinson of Illinois to serve as president of the National Cannery Association during the ensuing year.

It finds like pleasure in proposing the name of Mr. Henry Burden of New York to serve as vice-president during the ensuing year.

And it finds special pleasure and satisfaction in proposing the name of Mr. Frank E. Gorrell of Washington, D. C., as secretary-treasurer, to serve during the ensuing year.

Your committee has taken into account that the terms of eleven directors are now about to expire. Whereas the board of directors has hitherto consisted of thirty-three members, your committee now finds it to be conducive to the best interests of the association that the number be made to consist of thirty-seven for a reason to be set forth and explained.

In order to replace the eleven members of the board of directors whose terms are about to expire, your committee proposes for your consideration these names:

James Hutchinson, Wisconsin; S. B. Orr, Ohio; F. H. Shook, Ohio; W. R. Roach, Michigan; E. V. Stockham, Maryland; C. H. Bentley, California; W. F. Burrows, Illinois; E. B. Deming, Washington; H. L. Cannon, Delaware; S. F. Taylor, New York; B. M. Fernald, Maine.

Your committee has thought it important to take into account other canning sections to which hitherto attention has been omitted. For this and for other equally good reasons it proposes an increase in the number of directors from thirty-three as hitherto, to thirty-seven. Your committee therefore nominates Mr. William C. Leisch of Wisconsin to serve during a term of one year; Dr. J. H. Jastremski of Louisiana to serve during a term of two years, and Mr. Henry Worden, Hazel Hill Canning Company, Fredericksburg, Va., to serve a term of three years. Respectfully submitted,

FRANK GERBER, Chairman.

Meetings of the pea and tomato sections were held separately at the Armory Wednesday forenoon. The secretary's report and chairman's report for each section were read at the opening of the two meetings, after which nominating committees were appointed. The following speakers were heard at the meeting of the pea section:

J. A. Hageman, Henry Burden, E. A. Kerr and A. G. Tamm, while the tomato section was addressed by F. A. Torsch, F. M. Shook, George W. Drake, William Silver, E. A. Kerr, John R. Baines and John A. Lee. The latter, a well-known canned foods broker of Chicago, delivered a comprehensive and particularly interesting address, which is herewith reported, in full, because of its peculiar interest to readers of this publication. Mr. Lee's subject was "Buying and Selling Futures":

By John A. Lee

In studying this subject I have conferred orally and by mail with a large number of canners, wholesale grocers, brokers and retail grocers in all parts of the United States.

There is, I find, such a divergence of views that it is very difficult to harmonize them, or even to give from analysis a consensus of opinion, and I can only make deductions and draw conclusions, eliminating so far as possible the bias of personal interest, and prejudice, making all virtually subsidiary to the best apparent welfare and need of the canning industry.

I am unable to find any especial reason in selling futures applicable to canned tomatoes that will not equally apply to all canned foods and will discuss the method as of general application.

I thank all those with whom I have conferred for having favored me with their views. Their ideas were imparted to me in confidence and I cannot thank them by name. It is enough to say that some of the best and wisest men in the business were consulted; men who so esteem the welfare of

the canning industry that they would not permit their individual opinions to stand in the way of its advancement.

WHAT ARE FUTURE SALES?

Canned tomatoes are packed from July 1 to October 15 in the United States. The season sometimes begins a few days earlier and lasts a few days longer. The average annual output for five years past has been about twelve and a half million cases.

It is the custom among canners to sell or contract a considerable part of their output, in advance of the packing season, so that the goods can be shipped as soon as manufactured and ready. They do so because they must pay cash for cans, cases, labor and raw tomatoes and the value of the output is far greater than the capital controlled by canners and the volume much greater than they would have storage room for, hence they prefer to sell a portion of their pack even at a low price, in order to get money with which to continue packing, and carry whatever surplus they may have until it can be sold to advantage.

The canner early in the year or even later in the spring, contracts with growers of tomatoes at a fixed price per ton delivered at his factory, and sometimes arranges to plant and grow tomatoes himself.

When he has his contracts with growers made, or planting provided for, he authorizes his brokers to make sales and send in the contracts.

There is usually in such contracts a limited delivery clause, or pro-rata delivery clause, but not always, as some canners contract for a full 100 per cent delivery and take chances.

The terms made on future sales are usually what is known as cash on arrival or in ten days less 1½ per cent discount. The usual specifications as to pure food guaranty, swell guaranty, and other conditions that are customary, are inserted.

SIMILAR CUSTOM IN OTHER LINES.

The large manufacturers of boots and shoes, hats and caps, hardware, clothing, dry goods, iron and steel, paper, leather and nearly all important staple lines sell their products for future delivery. They could not otherwise do business, and could not afford to assume the risk of piling up a big lot of unsold merchandise, relying on selling after it was manufactured.

They take no such chances, and neither may the canner assume such a risk.

In fact, most staple goods in the lines mentioned are manufactured to order, and if canners could adopt such a course, and pack little or no surplus stock, they would get better prices and better profits; but they cannot do so, as their season is short and their raw material perishable and they must manufacture when they can get it and before it is gone.

The other lines mentioned are capitalized much heavier than are the canneries, and still they take orders frequently twelve or more months before delivery.

ADVANTAGE TO WHOLESALE GROCERS.

We hear it continually reiterated as a way to increase the sales of canned foods to consumers, "Encourage consumers to buy by the case or dozen rather than by the can."

Does not the same principle apply to transactions between wholesale grocers and retail grocers? If an increased distribution is desired it is certainly not advisable to restrict sales, consequently wholesalers should induce retailers to buy freely, rather than a case or two at a time.

If a retail grocer has a good stock of canned foods bought and paid for, or to be paid for, he will exert himself to sell them. If he owns only a few cases he will not push their sale.

When a wholesale grocer puts out canned foods under his own labels, the purchase and sale of futures by him is absolutely essential to getting the quality needed and supplying it to his customers, the retail grocers. Selections of quality are hard to secure after the season has advanced a little, as canners do not and will not carry the goods and will sell out early.

Wholesale grocers are usually possessed of large capital, and ample credit and can well afford to buy futures in canned

foods for their private labels and carry the stock, in order to obtain the choicest qualities and selections. They are also usually equipped with good warehouses and are better prepared to take care of canned foods than are canners.

The selected or choicest qualities of canned foods, as used by wholesale grocers under their own labels, seldom decline and are never in oversupply. In fact they usually become scarce and higher in price as the season advances.

Wholesale grocers cannot "trust to luck" or to chance for a supply of canned foods for their own labels. They must furnish their customers with quality, and cannot do so by buying promiscuously of spot goods, after futures have been delivered.

A wholesale grocer usually secures a lower price, quality considered, by buying canned tomatoes for future delivery when packed, than by buying spot goods. He presumably passes this advantage in price on to his customers, the retail grocers.

Select qualities are largely "packed to order," just as a man has a suit of clothes made to order, that he may have a good fit. If he buys his clothes ready made, he trusts to chance for a fit and seldom gets it.

In establishing or keeping established their own brands or in promoting the sale of a canner's brand of canned foods controlled by them, the wholesale grocers essentially must take orders from retailers for future delivery in advance of the packing season.

ADVANTAGE TO RETAIL DEALERS.

The officers of the National Association of Retail Grocers seem to have adopted a policy of condemning and discouraging the buying of canned foods for future delivery.

Their argument opposing the practice seems to be chiefly directed against the speculative feature involved.

The temptation to overstock, the tying up of too much capital, the infrequent advances and frequent declines, the failure to avail of the advanced prices in retailing, and a restriction of credit owing to overstocking in the line seem to be the more important objections which are urged by the opposing retail leaders.

It will be noted that all these arguments are based upon an abuse rather than a use of the method and privilege and rather seem to reflect upon the average judgment of retail grocers than upon the method.

I hold that retail grocers could and should, in turn, sell canned foods for future delivery to their customers, the consumers, by the quantity and stock them up for the season; thereby largely increasing the use of canned foods and adding to their own profits. If they do not do so the average housekeeper buys a lot of jars from the ten cent store and a lot of stale fruits and vegetables from the hawkers and some sugar from the retail grocer at or below cost, and proceeds to stock herself up for the winter at a higher cost and of poorer quality than the retail grocer could have furnished.

With the highest assurances of respect and kindly consideration for the officers and leaders of the National and other associations of retail grocers, I protest against this proposition and assert that it is based almost entirely upon a consideration of price rather than quality, the latter being by far the more important consideration, and upon a disposition to belittle and discredit the commercial judgment of a large and overwhelming majority of their members, which is not justified by conditions.

I hold that unless a commercial method is immoral or dishonest or of undisputed disadvantage to members, which is not the case with the buying of canned food futures, that the leaders of a great national commercial association should not discriminate against and oppress a friendly manufacturing industry, by condemning and denouncing a custom or method of selling that is essential to the peculiar nature of its business and its continued welfare and progress.

Further—I have been told, but I am not going to be so presumptuous or reckless as to charge it, that the strongest opponents of future canned foods buying among the leaders of the retail grocers are themselves very heavy purchasers of future in that line. They are, however, my excellent good

friends, and I do not propose to press this charge of inconsistency.

ESSENTIALS TO CANNERS.

Provided contracts for the future delivery of canned tomatoes are properly guarded against the contingencies of weather and crop shortage, the canner who sells his output in advance secures a number of advantages.

He can ship his product when ready and thereby get his money promptly and protect his credit at the bank and he can operate with smaller capital and be free to pay cash for cans, cases, labor, and raw material as is necessary and customary.

He can devote his attention to the careful and proper manufacturing of his product free from the care and worry of selling it as it is produced.

His management of the sales of his product, if made in advance of the packing season, can also receive his personal attention.

He can be guided as to what quantities and qualities to produce, and make his contracts with growers, supply people and labor accordingly. If he does not sell futures he is groping in the darkness, not knowing what price his goods will bring, or what sizes, kinds or qualities will prove salable. Instead of making his product to order, if he sells no future, he must confine his output to ready-made qualities and accept ready-made prices.

VITAL TO DEVELOPMENT.

As contrasted with other manufacturers in different lines, the canner is at a distinct disadvantage, for he must manufacture in a brief period, when his materials are at their proper maturity, and cannot operate his factory, except for a brief period annually, and it is necessary for him to know to what extent he can safely produce.

I hold that if the system of future purchases of canned foods is to be opposed and restricted by wholesale and retail grocers, that canners will be compelled to readjust their entire system of capitalization and distribution, undertake to an extent their own distribution, and charge much higher prices for their products.

I maintain that the system of selling a portion of the output of canneries in advance is absolutely essential to the progress of canning along the present lines of organization of the industry, and that grocers, wholesale and retail, who antagonize the system of future sales are opposing their own best interests and quarreling with their bread and butter.

WHO FAVOR THE METHOD.

I find from an analysis of a large number of replies to my letters that those who favor the future sale and purchase of canned tomatoes are, generally speaking, wholesale grocers who get fair prices and furnish uniform and superior qualities and retail grocers who are particular and discriminating in relation to the quality of their goods and who charge a fair price for their service.

WHO OPPOSE THE METHOD.

I find that price cutters are generally opposed to the sale and purchase of futures. Those business organizations which base their claims for patronage largely upon very low prices, usually prefer to bide their time and scalp the market for bargains, and frequently have great tribulation when buying canned foods, as needed, in keeping up the quality of their stock.

I know of some canners who do not favor future sales of canned tomatoes. One especially, and a most able canner too, who says that he packs all the tomatoes he can and as good as he knows how, and after figuring their cost, places a selling price on them and holds them until he gets the price. He says that he has sometimes held his tomatoes two or even three years before he could get his price, but has always found that the market would come to him finally. Few canners are strong enough financially or would have the patience and nerve to pursue that rather novel policy.

Some wholesalers who buy futures speculatively, rather than for the advantage of selection for quality, get disappointed sometimes for a year or so at the course of prices,

and swear off; but they generally come round again after a year passes wherein they have held out at the wrong time as some did this last year.

WHAT QUALITIES SHOULD BE SOLD.

I find that some wholesalers maintain that only extra standard and fancy qualities of tomatoes should be contracted for future delivery, the packed to order grades, and that common standards should be bought only as needed, and that wholesalers should not sell the standard canned tomatoes for future delivery to the retail grocers.

Canners generally do not agree with that view, because the large majority of canners pack standards only and they usually want to sell a part of their output for future delivery.

NECESSARY METHOD AS ORGANIZED.

In the present stage of development of the canning industry the advance sale of canned tomatoes and other canned foods for future delivery is certainly essential to its continued and steady development.

There is not sufficient capital invested and there is not sufficient credit established by canners to justify them in attempting to produce the required volume of canned tomatoes necessary for the needs of consumers, and to hold the goods until needed.

It is estimated that there are about one thousand practical operating tomato canneries in the United States, and that they have an investment of about an average of ten thousand dollars each, or ten million dollars total. About half of the capital is invested in plants and machinery, leaving a capital of five million dollars free with which to handle an average annual output of twelve and a half million cases of canned tomatoes of an average value of about eighteen million dollars. The difficulty is apparent.

Sometime in the future, when the canning industry is better organized with larger capital and more credit, the canners may be able to eliminate the practice of future sales of canned tomatoes, but until those things are done the sale of futures must continue.

OPPOSITION UNWISE AND DANGEROUS.

I think the wholesale grocer who opposes the purchase and sale of canned tomatoes for future delivery is wrong and unwise. He is thereby forcing canners to increase their capital and to undertake the organization of sales departments and the distribution of their own goods.

The mission, the field of effort, of the wholesale grocer is to be a distributor for manufacturers, to furnish the capital with which to carry a considerable portion of their output, and to distribute manufacturers' products by maintaining a well organized and controlled selling force and system.

If the wholesale grocer declines this responsibility and refuses to assume or continue his part of the work, though still desiring to reap his part of the profits, what then?

The canning industry is not going to stop in its onward march of development! It will take no hesitating step, no step backward! Its mission is too great, its work too important to be long impeded, and it will with gathered strength roll over and obliterate obstructions as the Red Sea obliterated the hosts of King Pharaoh! (If you would like to know how that was done read Exodus, chapter 14. It was a complete job and well done!)

This canning industry, this magnificent force for economy and conservation, is fast becoming essential to the very life and living of the world's people, and will go on! and onward! and still on! whether the wholesale grocers or the retail grocers buy futures or not, for it will take more brooms than the grocers carry in stock to sweep back from their paths this rising, blessed, life saving tide of this twentieth century.

The wholesale grocer has so far done his duty and shouldered his part of the burden and reaped his profits.

The retail grocers have also done well and have shown their appreciation of the industry and their friendship toward it.

Let them continue in well doing and in their friendly support of a great industry that has brought them prestige and profits.

DEDUCTIONS AND SUGGESTIONS.

Concluding, I want to say to tomato canners and other canners, as a synopsis of my conclusions and deductions from reading a large number of letters I have received and studied, written from many viewpoints by practical people:

Sell futures, a proportion at least of your prospective output, and then restrict your output proportionately to your sales of futures, and do not throw upon the market a large, unsold surplus, thereby destroying the profits of your customers who have bought of you, and who deserve your consideration and protection, as well as the profit on your surplus. Sell for your own label, for private label, or unlabeled, pack the goods up to specifications and to grade and get a profit.

To wholesale grocers I would say: Buy futures, not speculatively, or in excess of your needs, but for quality as well as price.

Sell future canned tomatoes and other canned foods to retail grocers and sell them freely, but do not overstock them or induce them to speculate, but sell them select qualities which they cannot easily get later in the season, and encourage and urge them to sell futures to consumers, their customers in turn, but the case and help them to do so when you can.

To retail grocers I would say: Buy futures carefully and judiciously and get the qualities you need. Do not buy in excess of your requirements, hoping that the price will go up. It generally will not go up very much, and if it does you will not have enough profit from the advance to justify speculation. Sell futures to your customers by the dozen or case and stock them up and keep them stocked up, and in that way hold their trade and increase your business and profits.

In doing so you will help to build up a splendid industry at which no man can truthfully point the finger of criticism because of its immorality, or wastefulness, or unwholesomeness or uncommendability, but which is one that deserves your support and co-operation because it is a blessed beneficence to the world.

Reports of nominating committees and election of officers concluded the program of each of the two sections.

Wednesday afternoon, at 2:30 o'clock, an informal meeting of state food commissioners was held in the Red Room of the Hotel Seelbach. This meeting, which was fathered and brought to a gratifying success by Dr. H. E. Barnard, of Indiana, was attended by all those at the convention whose business brings them in contact with food administration, legislation or control. Among those present were Dr. Wm. Frear of Harrisburg, Pa.; Dr. W. D. Bigelow, chief chemist, National Canners' Association; Harry L. Eskew, food commissioner of Tennessee; Dr. H. E. Barnard, food commissioner of Indiana; George Weigle, food commissioner of Wisconsin; George N. Numsen, president National Canners' Association, and Richard Dickinson, president-elect National Canners' Association; J. O. Le Bach, Kentucky; N. L. Bunnell, Ohio; F. L. Shannon, Michigan; T. P. Sullivan, Illinois, and H. S. Bailey, U. S. Department of Agriculture. This meeting proved to be a tremendous success from the standpoint of co-operative efficiency. A spirit of good-fellowship and mutual understanding prevailed which, it is safe to say, has never before appeared between manufacturers of foods and food control officials.

A meeting of the corn section was held at the Armory at 10 o'clock Thursday morning, in the course of which the following speakers were heard: Walter J. Sears, Daniel G. Trent, Ira S. Whitmer, George W. Drake, J. W. McCall and E. A. Kerr.

Concurrently a meeting of the milk section was held at the Waterson. The speakers at this meeting were H. E. Otting, J. B. Cook, W. M. Gladding and Walter Page.

During the course of the convention a kraut section was formed. A meeting of this section was held at 10 o'clock Thursday forenoon, at which A. E. Slessman and Dr. A. L. Round were heard.

Thursday evening a theater party was tendered the conventioners by the American Can Co., at B. F. Keith's Theater. A delightful time was enjoyed by all who were present and the special program which had been prepared for the occasion proved very pleasing to the large audience.

Friday morning the unfinished business was taken up and disposed of expeditiously. This comprised principally the reports of committees. An important side feature of the ninth annual convention was the thirteenth annual meeting of the National Canned Foods and Dried Fruit Brokers' As-

sociation, which held sessions Monday evening, Tuesday forenoon and Wednesday forenoon.

Throughout the entire period of the convention the exhibition hall, at the Armory, was open to visitors at stated intervals. Canning machinery, seeds and other canners' supplies were on display here and proved of great interest and instruction.

A fruit section was also organized during the course of the convention. The inspiration for this new organization is credited to Frank Gorrell, secretary of the National Canners' Association, who is to be congratulated for his initiative.

Bureau of Chemistry Extends Research

WORK for increasing the production of foods, including new uses for farm and sea products, the utilization of wastes, and the development of methods for preventing spoilage in perishable products, has been greatly extended during the fiscal year ending June 30, 1915, according to the report of the Chief Chemist of the United States Department of Agriculture, which has just been published. The research work directed towards conserving the food supply by developing new uses for products and preventing waste or spoilage has been separated from that directed towards the detection of adulteration, with resultant increased activity and efficiency in both lines of work. It is the intention, the report states, to give special attention to the development of the research relating to the application of chemistry to agriculture.

A laboratory was established to study the decomposition and fermentation of food products with the object of lessening the great waste that occurs from these causes. Studies are under way relating to spoilage in cheese, butter, cereals, and forage and feeding stuffs. Investigations looking for better methods for handling, packing, storing and shipping fish, poultry and eggs were continued throughout the year. The enormous losses due to the breakage of eggs in transit have been reduced by the adoption on the part of the shippers of methods developed by these studies for bracing eggs in cases, bracing cases in cars, and bracing, buffing, and shifting cars. Experiments were commenced to determine the best methods of feeding poultry for increase in weight and quality. The sardine investigations were continued and resulted in a further improvement of the quality of the pack. Methods for utilizing waste in the sardine industry were recommended, and in co-operation with the Bureau of Animal Industry the feeding value of fish meal was determined.

Important progress was made in investigations for the improvement of the methods of manufacture of cane sirup in order to obtain a uniformly bright sirup that will not ferment. The work to improve methods of manufacture of candy, jams, preserves, jellies and marmalades was continued. Experiments in drying potatoes on a commercial scale for stock feed were begun during the year. Other work on potatoes included methods for the manufacture of potato starch, glucose, and dextrin. This work is designed to utilize cull potatoes which are not suitable for food purposes and to provide an outlet for the surplus supply in years of over production. Investigations for a similar purpose were continued in connection with citrus fruits, by giving attention to developing methods for manufacturing citric acid, lemon oil, orange juice, orange vinegar, and other by-products from oranges and lemons.

The division of the country into three inspection districts, with each district under the immediate supervision of an experienced officer, has made it possible to maintain a closer and more effective supervision of interstate and foreign commerce in food and drug products. The range of samples collected and analyzed represented practically all classes of foods and drugs on the market. An extensive practice of mixing low grade coffees with those of a higher grade and selling the mixture for the higher grade was checked. Seizures of large consignments of oats adulterated by the

addition of barley, weed seeds or water were made. Other forms of adulteration that received special attention were the adulteration of pepper with ground pepper shells, of canned tomatoes with water, of dried apples with water, of cider vinegar with distilled vinegar, the manipulation of smutty barley and the canning of decomposed cull beans.

Fifty-six actions based upon false and fraudulent claims as to the curative powers of medicines and mineral waters were terminated favorably to the government, and a number of other actions for similar offenses are pending. 103,343 consignments of foods and drugs offered for importation into the United States were examined, of which number 7,744 were denied entry.

The Office of State Co-operative Food and Drug Control, established in 1914, has been instrumental in bringing about close co-operation with state officials charged with the enforcement of state laws controlling traffic in food and drugs, while the district system recently inaugurated has made it possible to put into practical effect specific co-operative projects. With the assistance of the state and municipal officials of Illinois, an extensive traffic in decomposed eggs was broken up, and the traffic in discarded eggs so regulated as to prevent the sale for food purposes of eggs unfit for food, while saving such eggs as were edible. Similar co-operative work was carried on in connection with the milk supply of small cities near state boundaries. In cases where it was found that the production of low grade milk was due to lack of knowledge, on the part of the producers, of the best methods for handling it, dairy experts from the department showed them how to improve their methods.

Co-operation with state officials has been particularly effective in advancing the work on standards. A joint committee on definitions and standards, representing the Federal officials and the state organizations that are interested in food law enforcement, has been formed. During the past year standards for a number of food products have been formulated and adopted.

LEMON EXTRACT RULING.

Fractional strength lemon extract cannot be sold in Iowa after May 1, according to a ruling made recently by the state food and dairy department. Any so-called fractional strength extract which is on sale in Iowa after that date will be seized by the inspectors of the food and dairy department and declared misbranded.

This step has been decided on by the state food and dairy department after much deliberation. The department now takes the position that these extracts do not comply with the food laws which fix a standard for lemon extract and turpentineless extract, and that they are therefore illegal. In order to give an opportunity to all dealers handling these products to clean up their stock the department has set May 1 as the final date before prosecutions will be started.

Since the state went "dry" there has been a great deal of trouble over fractional strength lemon extract. Reputable dealers claim that they do not want to handle this product, as it is apt to put them in the bootlegging class.

Pennsylvania Supreme Court Holds Packer Liable for Injury Incurred by Consumer in Eating Diseased Product—Important Precedent Established—Fact that Grocer Intervenes As Distributor Immaterial

A VERDICT for \$3,000 in favor of plaintiff, whose husband died from the effects of having eaten government-inspected pork affected with trichinosis, the pork having been sold to the consumer in the original package, has been upheld by the Supreme court of Pennsylvania.

Follows part of the opinion:

The sale in this case was not made by defendant to plaintiff directly, but indirectly through Louis Octocavani, a dealer, though the testimony as to that is not clear. But assuming that Octocavani who ordered the meat was a dealer, the first question to be considered is whether there was an implied warranty by defendant, that the meat sold to the dealer was free from disease, wholesome and fit to eat, and whether this warranty extended to the consumer after the meat had passed through the dealer's hands.

The general rule is that where the sale of articles of food is for immediate consumption, there is an implied warranty that the food is wholesome and fit for the purpose intended, irrespective of the seller's knowledge of disease or defects therein: 35 Cyc. 407 and cases cited.

The contention that the warranty did not extend to subsequent purchasers after the meat passed through the hands of middlemen cannot be sustained. The case of *Ketterer vs. Armour & Co.*, 200 Fed. Repr. 322, is directly in point, that being a case of sale of pork infected with trichinæ. It was there said by Circuit Judge Noyes, at page 322, "The contention of the defendant is that a manufacturer who deals with the middleman and not directly with the consumer owes the latter no duty whatever except the duty owing to all men to refrain from knowingly and wilfully inflicting injury. And as wilful injury is hardly conceivable, the claim comes down to this, that a producer of meats can take no steps to detect poisonous parasites in his products, although the danger of their presence is well known and can be guarded against, and yet may sell such products with impunity so far as the demands of poisoned consumers are concerned. This contention is based upon the theory that so long as the manufacturer sells only to the dealer or middleman, he is a stranger to the consumer; there is no contractual relationship to base a duty upon. It is said that the dealer may sue the manufacturer and the consumer may sue the dealer, but that the consumer cannot sue the manufacturer. In other words, if the claim be well founded the middleman has an effective remedy, but he is not injured. The consumer is injured, but he cannot look to the wrongdoer and must sue the local dealer, who is likely to be irresponsible and is certainly free from fault.

And this contention has support in authority. It is unquestionably the rule in the case of many manufactured articles where the consequences of negligent manufacture cannot be followed down to their final results. Thus, as is pointed out in one of the cases, a careless manufacturer of iron could not be held responsible for the destruction of a steamer from the bursting of a boiler, into the construction of which his imperfect material, after passing through many hands, had gone. In such cases, and in others less clear, it is said that public policy requires that the remedy for negli-

gence should not be pressed to an impracticable extreme. But I am wholly unable to apply this rule in the present case; much more to apply it in the name of public policy. Public policy regards the public good and I am yet to be convinced that the public welfare will be promoted by holding that producers and manufacturers owe no duty to consumers to guard against diseased and poisonous meats and provisions except in those isolated cases where they happen to sell directly to them.

The remedies of injured consumers ought not to be made to depend upon the intricacies of the law of sales. The obligation of the manufacturer should not be based alone upon privity of contract. It should rest, as was once said, upon "the demands of social justice." The producer should be held responsible for the results of negligent acts which he can readily foresee. There is no analogy between the case where defective material, after passing through many hands, produces not-to-be-looked-for ill effects. The iron manufacturer who fails to inspect a piece of iron cannot foresee that it will be used in a boiler and cause a ship to sink. But the meat packer who fails to inspect his products for poisonous parasite or ingredients knows that poison will poison, and that the persons to be poisoned through his neglect will be those who eat his products, and that no one else. The natural, probable and almost inevitable result of his negligence will be injury to the consumer, and, in my opinion, every consideration of law and public policy requires that the consumer should have a remedy.

To the same effect is *Meshbeshier vs. Channellene Oil Co.*, 107 Minn. 104, where the manufacturer was held liable to the consumer for impure oil purchased by the latter from a retail grocer.

The same rule was applied by this court in *Elkins, Bly & Co. vs. McKean*, 79 Pa. 493, to the sale of oil. In that case it was said by Mr. Chief Justice Agnew, page 502, "The substance of that point is, that after the oil had passed from the defendants in large quantities to Arbuckle & Co., and from them in smaller quantities to Caskey, and from Caskey to Steel Short and Hart, who sold the lampful to McKean, there can be no recovery. The argument in support of this point is founded upon the alleged successive intervening liabilities of the persons through whose hands the oil had passed. But this proposition is unsound as a legal defense. The number of hands through which the oil had passed might furnish a strong argument on the question of identity, and the guilty knowledge of Elkins, Bly & Co. as to this particular oil, but could not constitute a legal bar to recovery, if the identity of the oil and the guilty knowledge were made clear."

These authorities effectively dispose of this question. It is contended by the defendant, however, that since the sale was made in the original package, used in interstate shipment, the transaction was exclusively within the federal statutes relating to the inspection and sale and transportation of meat, and neither the common law doctrine of implied warranty nor the Pennsylvania statute above referred to, nor other Pennsylvania statute laws forbidding the sale of adulterated

food applies, and as defendant had fully complied with the federal inspection laws, the lower court was right in entering judgment for defendant.

Under the federal meat and food acts and the rules of the department, the packer is forbidden to make an inspection prior to the government's inspection, in the manner in which such inspection is made, but there is nothing to indicate that a subsequent inspection is forbidden or could not be made by the packer. Defendant made no pretense of showing such independent inspection or examination, but relies upon the argument, that no such inspection was necessary and that its duty to the consumer was fulfilled by the government inspection.

We agree with the reasoning of above cases and hold that the federal statutes providing for meat inspection by government officers do not relieve the packer from liability for damages where he has made no inspection nor taken any steps to ascertain for himself whether the meat sold by him is fit for food. The common law duty to sell only whole-

some food still remains and the burden of discharging this duty has not been shifted to government inspectors. The jury having found that the death of plaintiff's husband was the result of eating meat packed by defendant which was affected by a disease which the evidence showed was discoverable by proper inspection, the burden was on defendant to show fulfillment of its duty, which burden was not met by merely proving inspection by the United States government inspectors.

Under the foregoing principles, governing the sale of articles of food, a prima facie case is made out by proof that the meat sold by defendant was diseased and caused the death of plaintiff's husband. It was not necessary to go farther and prove defendant knew the food was unwholesome. Defendant's duty was absolute: 35 Cyc. 407; Wiedeman vs. Keller, supra; Meshbeshier vs. Channellene Oil Co., supra. It was bound to know that the meat was unwholesome and unfit for food and this duty was not performed by merely showing an inspection and approval by United States government inspectors.

Views and Principles of One Official

Address of F. H. Fricke, Food and Drug Commissioner of Missouri, before State Canners' Convention, at Kansas City

I DEEM this convention of the very highest importance to the consuming public of the state, and it appears to me that an official charged with the duty of protecting them in the very essential matter of food, could not more profitably employ his time than to come into active contact with those who in large measure are supplying public wants in this respect.

I am here today to say a few words about the work of my department, and to give you the best advice that I can of the policy which I have been trying, and shall continue to try to carry into effect, and also because I am most deeply interested in learning everything possible regarding methods adopted in the canning of foods.

The aim of all food and drug legislation is to see that only food and drugs which are free from all impurities and adulteration shall ultimately reach the consumer, and that he shall not be imposed upon by articles whose strength or purity are misrepresented.

These laws are sound, wholesome ones, and properly administered are of inestimable value to the public. All reputable manufacturers and dealers pride themselves upon the methods of their business, and the quality of the products which they manufacture and sell, and, recognizing that they are members of communities where there must be a fair give and take in their mutual dealings, very gladly and cheerfully submit to all reasonable regulations which the law imposes upon them in the conduct of their business in the interest of the public.

But no matter how fair and reasonable a law may be its good effects may be greatly marred or absolutely destroyed by too drastic methods applied in its enforcement.

An official who desires to do his duty fully and honestly, as is the case of a Food and Drug Commissioner, should not only be fair to the consumer, but he should also be fair and reasonable to the producer and distributor.

The official who looks through a microscope into every little crook and cranny, with a view to find some trifling defect to pounce upon, makes himself a nuisance to business men, and of no earthly good to those he is supposed to protect.

In the very nature of things, it is impossible, no matter how hard we try, to achieve perfection, where human skill, forethought and ingenuity are employed—the law, in this instance, does not expect it, and an official charged with its enforcement should not expect it.

In passing upon every question concerning the manufacture and sale of food and drugs, I have most carefully endeavored to find out and to consider the difficulties with which manufacturers and dealers were confronted in the production, handling and sale of their products, to make liberal allow-

ances for same, and to avoid as much as possible the hampering of business by unnecessarily strict and technical official inspection, and I hope I have succeeded in this. At the same time, I tell you frankly that wherever I found manufacturers and dealers knowingly and continuously engaged in an attempt to sell articles unfit for the purpose for which they are to be used, I have gone after them as hard as I could, and if I didn't get them, it wasn't my fault.

I invite every man here today, and every person engaged in any business which comes under my jurisdiction, if he conceives himself to be unfairly treated by any action of mine or of my assistants, to prefer such complaint to me, and I promise you and him that I shall give to such complaint the greatest possible consideration, and if a wrong be done him, that wrong will, so far as I can do, be righted.

I have stated that in my official capacity of State Food and Drug Commissioner, I am charged with the duty of protecting the consuming public, but to the industry in which the members of this organization is engaged my department, so far from being an obstruction in the path of their progress, is of incalculable benefit to them, and entitled to their heartiest co-operation and support.

There is a prejudice—a rapidly disappearing prejudice, I think—amongst some classes of the people against the use of canned goods. Manufacturers engaged in the commercial canning of goods have had a long and arduous battle to fight to eliminate that prejudice, and to get the consuming public to buy their goods. I do not profess to have any more than an elementary idea of the canning of food business, and know little of its details, but, in the light of our experience, it must be admitted that food which has deteriorated either before undergoing the process of canning, or during or after the process, and which reaches the consumer in such a condition, has in many cases produced fatal consequences.

One case of serious illness or death caused by ptomaine poisoning, as a result of the consumption of deteriorated food put up in cans is a tremendous blow to the food canning industry, and largely helps to destroy the confidence of the public in canned goods. When either I, or my assistants find upon the shelves of a grocer or retailer of these goods, foods in cans which present the appearance of being swelled or flat soured, we caution the proprietors of these places not to dispose of them to their customers until, at least, some of them are analyzed. I claim we are not only protecting the public and the dealer himself, but the manufacturer, and possibly averting a calamity which may prove fatal to his business.

Now, I presume in the natural order of things, spoilage will occur in the preserving and canning of foods, even when

care is exercised, but the point where the most care should be exercised is in the examination of the cans before they are delivered to the dealers. As I understand it, considerable variations of heat and cold cause in some cases deterioration of some classes of canned goods, and wherever such conditions are likely to arise, it seems to me it would be a very wise and necessary precaution to accompany the delivery of such goods with specific instructions for their proper keeping.

The holding of canned goods for a considerable period of time is, I believe, attended with some danger. The tin lining will in the course of time go into solution, and this will materially affect the contents of the can. This is a question of considerable difficulty to the manufacturer, yet, a timely hint to his customers that their goods should not be held too long in stock would induce him to take measures such as the dealers who are overstocked resort to, to get rid of old stock on the best terms that he possibly can.

There is one thing of paramount importance in connection with this industry, and it is this—that a packer of canned goods, more than any other class of manufacturers or producer, ought to make his article correspond in every particular with the statement or claims which he makes for them on his labels. The can should contain the full measure of fruit, cereals and other foods which it is supposed to contain, and when sirups or other liquids are used extensively, that fact should be indicated upon the label.

The Department of Agriculture of the United States requires that all foods packed in a semi-liquid condition, or as solids surrounded by liquids, should be filled to within at least one inch of the top, and the free liquids should cover the solids.

It seems to me it would be a far better, a fairer and possibly in the end a more profitable method, instead of mixing the solids with too much liquids in a larger can, to make smaller ones, and fill these in accordance with the ideas I have mentioned. I believe, too, the reduction in the price would constitute a strong inducement to a far larger class of customers to buy canned goods and increase the popularity of these articles.

If I go into a store and buy an article exposed for sale in its natural state, I have an opportunity of examining the article which I buy, and assuring myself if it is of the quality represented, but if I buy food put up in cans, I know nothing about it, and must take the packer's word for it, which appears on the outside of the can—that word ought to be the packer's bond.

To make that bond good, the packer should not only use the best and most scientific methods in the process of canning, but should not be tempted by the cheapness of price to buy articles which have plainly deteriorated, and insist that these articles shall come to his establishment in clean and sanitary containers, and this is particularly true in regard to fruit.

As a result of even my limited experience, I know that vast improvements have been made in the handling and process of packing food in cans, and a vast amount of money has been spent and much scientific ingenuity has been employed to insure the delivery of articles which shall permit good, wholesome food to the public.

Advertising of canned goods costs a great deal of money, and sometimes does not result in benefits corresponding to the outlay. I want to offer a suggestion to you today, which will avoid this expense and result in much direct benefit to your business. Very early in the beginning of my official term, I was confronted with a condition which at first disheartened me. I had only a small staff of inspectors—just six—and very little money at my command, and, yet, a vast amount of work confronted me, which I knew was impossible to handle with any degree of effectiveness. In this emergency, I invited the active co-operation of volunteer organizations, composed largely of housewives, and helped to organize some of these bodies in different parts of the state. I have received most valuable assistance from the members of these organizations, and found them but too willing to learn

everything connected with the articles which come into their homes.

Now, I would suggest that representatives of your organization be sent to meetings of these associations and exhibit the articles and explain the processes they are submitted to, and the method used in packing, and their value as food products. A suggestion was made to me by some progressive manufacturers of food, that they would be ready to show the public the method they adopted in their plants through moving picture reels. I warmly commended the project, which was carried into effect, and have found these pictures very popular and well received, and have used some of them in my lectures.

I shall be personally glad to place any of your representatives in contact with these organizations, or to make any suggestions which may be helpful in a picture display.

Everything is being canned nowadays. I happen to know an old German professor of vocal music, and one of his next door neighbors was a lady who indulged in a great many thrills which had more voice than music in them at the most inconvenient times, and which was very annoying to the neighbors, the professor included. One day this lady visited the professor and told him she would like to consult him about her voice. "I have heard it, madam," said he. "Then what do you think I had better do with my voice, professor?" she asked. "Can it, madam," says he—"can it, and send it down to the Indians—it won't disturb them."

Seriously, gentlemen, I believe that there is a great future before this industry. The rapidly increasing population of our cities, and the drift from the surrounding country to these centers presents a great problem of supplying these communities with food which must be brought from considerable distances, not to mention the special circumstances which from time to time arise for furnishing large food supplies, such as the present great European war. This problem can be solved, in my judgment, only by the use of canned goods. Many people, and I was one of them, doubted the fact that food could be kept as sweet, wholesome and palatable inside a can as when it was put there, but, I think it has been conclusively demonstrated that it can, and as day passes day, the consuming public are beginning to realize the inestimable benefit of having at their immediate command a supply of cereals, fruit, soup and other articles of food which require the expenditure of only a few moments' time in their preparation for the table, and in which there is no waste.

I am here to tell you that with this idea firmly implanted in my mind, I am prepared to help to boost by every means in my power, to encourage the use of canned goods amongst the consuming public, and to treat all persons and firms engaged in their preparation and sale with every consideration and fairness.

AMERICAN CRACKERS BADLY PACKED.

Frequent complaints have been made to this office by Guayaquil merchants of the broken state of crackers and biscuits imported from the United States, and as a consequence few are now sold there, although when received in good condition they gave entire satisfaction. In the year 1913 there were imported into Ecuador 53,658 pounds, of which but 3 per cent came from the United States, whereas practically the same quantity was imported the previous year, with 45 per cent credited to that country, the loss of trade being due to the bad condition in which they were received.

There is a constant demand there for cream crackers in 4-pound tins net and for other classes in ½ and 1-pound tins, but they must be packed so as to arrive unbroken in order to compete with British goods, the care taken with the packing of which being beyond criticism.

If American manufacturers of crackers and biscuits will carefully study the requirements of this market and satisfy them, they will be well repaid for the effort.



Notes from Field of Food Control



A GENERAL blanket measure designed to prohibit the misbranding of all articles entering into interstate commerce which are not already covered by the pure food and drug act and the insecticide act has been framed by a sub-committee of the House Committee on Interstate and Foreign Commerce and will be presented to the House shortly for consideration. The measure has the approval of the Secretary of Commerce, and, it is understood, meets in a general way with the commendation of the President and the majority leaders in the House of Representatives, including Chairman Adamson, of the committee. In its scope the general bill is practically unlimited. It prohibits the introduction into interstate commerce of any article, either for export or received from any foreign country, which is misbranded.

* * *

¶ The appointment of R. E. Clemens of Burke, Ia., to succeed J. J. Ross, resigned, as assistant dairy commissioner, was announced February 4 by W. B. Barney, dairy and food commissioner. Mr. Clemens is a buttermaker at Burke.

* * *

¶ THE AMERICAN FOOD JOURNAL wishes to extend its heartfelt sympathy to Dr. S. J. Crumbine of Topeka, Kansas, Ex-President of the Association of American Dairy, Food and Drug Officials, and to Mrs. Crumbine for the sad loss on February 18, of their only son, Warren, who died at Shanghai, China, of pneumonia. Young Mr. Crumbine's untimely passing is particularly pathetic when we think that it was only last October that he was married and took his bride to the foreign country.

* * *

¶ In the campaign of Frederick H. Fricke, State Food and Drug Inspector of Missouri, against the sale of oleomargarine as butter there were four convictions in St. Louis recently in Judge Miller's Court of Criminal Correction. M. E. Bucher of 1525 South Broadway, Arthur Cox of 4726 Leduc street, and Fred Nagel of 2261 Adelaide avenue, were fined \$50 each, and Thomas McLoughlin, 6404 Easton avenue, \$25. Inspector Fricke's prosecution is not aimed at suppressing the sale of oleo as such.

* * *

¶ A campaign by Philadelphia club women for the passage of the ordinance providing for the protection of food from dirt, dust, flies and promiscuous handling was inaugurated recently by pure food and home economics committee of the Civic Club. Members of the committee will get in touch with all women's clubs, and urge them to do their utmost to get the ordinance, which was introduced into councils last year, out of committee and have it passed as quickly as possible. The ordinance was introduced last fall by H. G. Trainer and reintroduced on January 6, when it was referred to the law committee.

* * *

¶ An inquiry into the sanitary conditions of every restaurant in the city of Chicago as well as the physical condition and general character of every employe, was launched by Health Commissioner John Dill Robertson. He issued an order calling upon every one of the 300 employes of his department to inspect the kitchens of restaurants in their various residence neighborhoods. Even the stenographers and their office workers of the health department will thus aid the 85 regular food inspectors, 15 of whom are detailed outside the city. That the mental condition of cooks and assistants in restaurant and club kitchens may be the subject for investigation was indicated during an interview with Dr. Robertson. A number of the big downtown hotels have voluntarily offered to make a physical test of their kitchen employes, acting upon the lines of a plan the health commissioner announced several weeks ago. In the report of the physical examination of any kitchen employe his personal character and mental condition would be noted.

¶ A modification of the regulations for marking the weight or measure of the contents of food packages has been announced by the United States Department of Agriculture in Food Inspection Decision 163. This permits the use of fractions in indicating weight and measure when there exists a definite trade custom for their use. Under previous rulings a package containing one-half gallon should be marked as 2 quarts, but now it may be marked as one-half gallon. The decision permits the use of the metric system in marking food packages, when this system is preferred, and specifies the terms in which weight or measure should be stated when the metric system is used.

* * *

¶ Robert Smithson, South Water street, Chicago, commission merchant, was fined \$50 recently by Federal Judge Carpenter on a charge of shipping foodstuffs in violation of the pure food law. The specific charge was that he shipped 6,500 pounds of frozen eggs to various eastern points, and that the eggs contained 4,000,000 bacteria to the cubic centimeter. A plea of guilty was entered. A fine of \$200 was imposed on the firm of Truax, Greene & Co. on a charge that drug tablets, 18 to 40 per cent short weight of the branded amount, had been shipped. Charles E. Timson and F. S. Burch & Co. were fined \$25 on each of a number of charges of shipping misbranded goods.

* * *

¶ The Jellico Grocery Co., Inc., of Jellico, Tenn., has recently constructed a plant for roasting coffee. The raw material is purchased at New York, Philadelphia and New Orleans and shipped to Jellico in carload lots, being distributed from there after roasted. This company has lodged a complaint with the Interstate Commerce Commission against the rate on coffee by both rail and water. It is claimed that the roads maintain class rates on coffee from the ports to Jellico, which class rates are applicable to "any quantity," but have failed and refused to establish commodity rates on coffee in carload quantities. Declaration is also made that an increase was put in effect the first of the year on coffee from the ports to Jellico.

* * *

¶ A hearing on the question of postponement of the effective date of Food Inspection Decision 153, which in substance forbids the use of guaranty legends and serial numbers on labels of foods and drugs in interstate commerce, will be held in the Bureau of Chemistry, 216 13th street, S. W., Washington, D. C., at 2 o'clock p. m., March 10, 1916. This decision, issued May 5, 1914, as originally promulgated, was to take effect May 1, 1915. Later, the date on which it was to take effect was postponed until May 1, 1916, with the proviso as to products packed and labeled prior to May 1, 1916, in accordance with law and with the regulations in effect prior to May 5, 1914, that the effective date was postponed until Nov. 1, 1916. Numerous requests recently have been made to the department for a further postponement. Those requesting this action represent that manufacturers and dealers still have on hand large quantities of labels printed prior to May 5, 1914, and bearing the guaranty legend and serial number. It is represented that this supply of labels in the aggregate cost many thousands of dollars, and that unless they can be used their owners will sustain a severe loss. On the other hand, many manufacturers, in expectation of the new regulation's going into operation next May, have already eliminated the guaranty legend and serial number from their labels. All parties interested in the question, whether in favor of the extension or opposed to it, are invited to attend the hearing and present such facts as may be material. Those unable to attend in person may submit their views in writing. Communications should be addressed to the Chief of the Bureau of Chemistry, U. S. Department of Agriculture, Washington, D. C.

¶ The following are some new provisions of the government label law, applying to the labels on canned goods: The use of labels bearing the serial number is prohibited after May 1, 1916. Statement of weight and contents of can must be in plain and conspicuous type. Where the food package contains more than one label, as in the case of bottled goods, the statement of weight must appear plainly and conspicuously on the principal label. Goods purchased by a packer can't go out under his own label unless actually packed by him, although his name may appear as the "distributor."

* * *

¶ Wholesale prosecutions of dealers in rotten eggs are promised by the Toledo health department. As the result of recent discoveries here and in other Ohio cities, health authorities claim to have unearthed a "ring" for the promotion of sale of spoiled eggs. Thousands of dozens of bad eggs have been discovered here in the past few weeks, say health authorities. Dr. D. W. Iford, health officer, declared: "You bet we are going to prosecute these violators to the limit if we get the goods on any of them." The local health department ordered returned to Cincinnati several cases of bad eggs which, it is charged, came indirectly from a dealer in the Queen City who makes a specialty of this trade. It is said bakers use eggs in various stages of deterioration, the manner of their use depending upon the degree of decomposition. "We have turned down in the past few weeks thousands of dozens of spoiled eggs. In the case of the Cincinnati shipment, we sent the health board the results of our laboratory tests and left it to that body to proceed with prosecutions if it desired to do so. In the last few days we have had in 30 or more samples of so-called egg powder, sold to bakers. We find it consists chiefly of adulterated rotten eggs." Cincinnati and Cleveland health departments have begun a war on rotten egg dealers, which, it is said, will be followed by definite action here if local connections with the "ring" can be established.

* * *

¶ W. B. Barney, Iowa Dairy and Food Commissioner; Dr. J. I. Gibson, State Veterinarian, and members of the Iowa Animal Health Commission recently declared that the eating of horse flesh instead of other meats by people in the east should be discouraged. The health department of New York has recently permitted horse flesh to be sold as an article of food and the action has attracted wide attention in the livestock industry. "As long as beef and pork can be obtained at the prevailing prices I see no necessity for the health department of New York or any other city approving the sale of horse meat," said Mr. Barney. "I do not think that many people will take to the new article of food, but there may be some of the foreign population who, having used horse meat in Europe, will buy it here if it can be obtained. But with the present price of horses I do not see how horse meat can be sold as cheap as beef and pork. I do not think that the people of Iowa would ever consider its use for an instant." Dr. Gibson said that while he never tasted horse flesh, the meat can be used for food. He told of a graduating class at a Kansas City veterinary college which served horse meat at the graduating banquet. Virtually all of the hotels and better class eating houses of that city refused to serve the banquet, when the committee called to make arrangements. Finally the committee found a restaurant man who agreed to serve the banquet," said Dr. Gibson. "The stunt was carried through, but it ruined the restaurant man. All of his trade left him after the banquet for fear they would be served with horse meat, too. I do not see why the American people should approve the eating of horse flesh. In Europe in the fighting zone there might be some reason for the French killing wounded horses and feeding the meat to the soldiers, but there seems no excuse for it in America. As long as Iowa can raise as fine beef cattle and as many hogs as go from this state to the packers each year, there is no necessity of resorting to the use of horse flesh." The members of the Animal Health Commission agreed with the veterinarian that the use of horse flesh as an article of food should be discouraged.

¶ The Department of Agriculture has been requested by many growers and shippers to define its position with respect to the application of the Federal Food and Drugs Act to the transportation in interstate commerce of dry pea or navy, medium and kidney beans. These requests have been prompted by the action of the department in recommending seizures of "cull" beans in sacks and of beans in cans which were found upon examination to contain considerable percentages of beans which were wholly or in part filthy, decomposed or putrid. Under the Federal Food and Drugs Act, beans, in common with other articles of food, are adulterated if they consist "in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance." "Cull" beans, in the opinion of the department, usually contain considerable percentages of beans which are wholly or in part filthy or decomposed and are therefore adulterated. The shipment in interstate commerce of such beans for food purposes is prohibited by the act. No objection is entertained, however, to the interstate shipment of "cull" beans for industrial purposes or for use other than as food for man if they are first treated by grinding or otherwise so as to render them unavailable for use as food for man. The department is informed that dry pea or navy, medium and kidney beans intended for use as food for man are sent customarily by the growers to elevators where the beans are sorted by hand-picking so as to eliminate the beans which are wholly or in part filthy, decomposed or putrid. It has been represented that in the process of hand-picking nearly all moldy or musty beans are removed, but that it is not practicable to remove all beans which are slightly decomposed. The department has not recommended the seizure of dry and mature pea or navy, medium or kidney beans which have been hand-picked in accordance with good commercial practice.

INTERSTATE SHIPMENT OF EGGS.

The Department of Agriculture has had under consideration for some time the application of the Federal Food and Drugs Act to the shipment in interstate commerce of eggs in the shell, especially the two classes of eggs known in the trade as "current receipts" and as "rejects" from candling rooms. "Current receipts" contain at different seasons of the year varying proportions of eggs which are filthy, decomposed, or putrid. "Rejects" from candling rooms, as a rule, contain large proportions of eggs which are filthy, decomposed, or putrid, and very small proportions of eggs suitable for consumption.

Under the Federal Food and Drugs Act, eggs, in common with other articles of food, are adulterated if they consist wholly or in part of a filthy, decomposed, or putrid substance. Section 2 of the Act prohibits the shipment in interstate commerce of foods which are adulterated and it is plain that this prohibition applies to the shipment in interstate commerce of "current receipts" or of "rejects" from candling rooms or of other grade of eggs in the shell unless the filthy, decomposed, or putrid eggs have been removed.

In the opinion of the department, eggs which contain yolks stuck to the shell, moldy eggs, black spots, mixed rots, addled eggs, black rots, and any other eggs which consist wholly or in part of a filthy, decomposed, or putrid substance, are adulterated.

The investigations of the department have shown that it is commercially practicable, by the method of candling, to eliminate from any given shipment most of the eggs of the kinds which the department regards as adulterated. It is not the practice of the department, however, to base proceedings under the Food and Drugs Act on shipments of eggs unless there are present larger percentages of bad eggs than are ordinarily present in recognized commercial grades of candled eggs. The department is informed that cases of eggs are not allowed to receive even the lowest candled egg grades if the cases contain more than one and one-half dozen or 5 per cent of bad eggs. Country shippers who are not certain of the freshness of their eggs should candle them before shipping them in interstate commerce.

Michigan Dairy and Food Department Destroyed by Fire—Commissioner Helme Has Narrow Escape from Death—Deadly Fumes Peril Rescuers — Defective Wiring Cause—Shannon a Jonah?

THE Michigan Dairy and Food Department was destroyed by fire about 6:30 a. m. February 24, 1916. Commissioner Helme had a narrow escape from death in the blaze, and was taken from his office by firemen. Mr. Helme, whose home is in Adrian, Mich., has always made a practice of sleeping in his office while at the headquarters in Lansing. According to Mr. Helme, on the morning of the fire, he awoke about 6:15, looked at his watch, and decided it was a little early to start the day's activities, and dropped off to sleep again. In about ten minutes he was again awakened to find his office filled with smoke. He jumped out of bed, groped his way to the telephone and turned in the alarm. By this time the bursting chemicals from the laboratory had filled the building with dense fumes and smoke, so that he could not see to dress, and exit through the halls was impossible.

Clad in just sufficient wearing apparel to pass the board of censors, Mr. Helme crawled to a front window and climbed out on the ledge. Here he waited until firemen could get ladders to him and take him off.

At 6 o'clock the night watchman passed through the building and detected nothing in the way of fire. Mr. Helme says he did not observe any sign of fire when he awoke at 6:15. Defective wiring is thought to have been the cause. No one had worked in the laboratory the night before, and everything appeared in the usual condition.

The Dairy and Food Department occupied the second floor of a building on one of the principal corners of the city of Lansing. The building was a three-story brick structure and had housed a number of state departments while the present capitol building was being constructed. It was erected in 1869, and was familiarly known as the "Old State Block."

The State Military Department occupied the first floor of the building, the Dairy and Food Department and the State Labor Department shared the second floor, while the Geological Survey and the Highway Department were quartered on the third floor.

The total damage is estimated at \$20,000. The Food Department's chemical laboratory was damaged the most of all, it being nearly a total loss. This was probably one of the most completely equipped state laboratories in the country. Many of the delicate, scientific instruments were imported from Germany and a large stock of imported chemicals were on hand. Since this supply is cut off, it will be difficult to replace them. All of the records were stored in a fireproof vault and were saved. Other offices were damaged by smoke and water.

The State Board of Auditors in a special meeting authorized the superintendent of the capitol to remodel the building and provide quarters for the Dairy and Food Department. A gang of carpenters, masons, painters, etc., are rushing the work on the building and it is expected that in a week's time temporary quarters will be provided so that work can be carried on as usual.

State Analyst F. L. Shannon thinks a hoodoo is following him around. While watching his office and laboratory go up in smoke, he was notified that his home, located some distance from the department, was on fire. Mr. Shannon was rushed home in an automobile to find a threatening blaze in

the basement. Upon the arrival of the fire department, however, the fire was easily checked. An investigation revealed that only a \$50 loss was entailed.

The Dairy and Food Department nipped in the bud what was intended to be a thriving business in a so-called "Consumption Cure," by arresting one A. Fitz of Battle Creek, Mich.

The last legislature appropriated \$100,000 to fight tuberculosis in Michigan. The State Board of Health was charged with the work. A special department of the board was created and a competent man placed in charge. As a part of the campaign the health authorities have been holding free tuberculosis clinics in various cities of the state. In some unknown manner, Fitz had obtained the names of the patients who visited these free clinics. Shortly after the health officials would leave a city, those patients who had visited these free clinics would be solicited to purchase a bottle of this famous "Consumption Cure," manufactured by A. Fitz, Battle Creek, Mich. The usual methods of the quack were employed and the poor unfortunate ones are separated from \$5 for a bottle of red colored liquid, which, according to the label, would "Cure Consumption."

One of the department's inspectors, whose home is in Battle Creek, learned of the traffic. He secured a bottle of the dope and submitted it to the state chemists. An analysis showed the preparation to consist essentially of an aqueous solution of sugar and salt flavored with oil of wintergreen, and colored red. Upon report of the analysis the officials immediately caused the arrest of the manufacturer. A hearing was held the first of the month and the defendant was bound over to the Circuit Court for trial.

CAMPAIGN AGAINST CHEAP CANDIES.

A. C. Norris of Rockford, Ill., high school has been for some time conducting a campaign of education in regard to the cheap candies that are being sold to children of the grade schools by neighborhood stores, and as a first step Mr. Norris had his high school class in chemistry try out the various inferior grades and the pure candies to arrive at definite conclusions and secure correct data. His last step has been to instruct the children of the fourth to eighth grades in the city schools by testing out these candies in their presence and giving a demonstration of how the candies are made, and the deleterious ingredients of charcoal, flour, also artificial flavors and coloring. Brownschool, Ellis and Church schools have already been visited and Highland school will have the same demonstration before the school. In the three schools already visited 500 children have pledged themselves to refrain from buying any of the cheap candies for a month. The stores catering to the penny trade, Mr. Norris asserts, are making at the rate of 60 cents to 90 cents a pound on these candies and the cheap and inferior grades are injurious to the children. The ministers' union is interested in the campaign and Mr. Norris is to present the same tests at the church suppers that the parents may understand the conditions and to have indisputable proof of the nature of the sweets that the young people and little children are buying at these convenient shops.



Washington D. C. News Letter



A MERICAN babies had their lives saved again on February 4, which was the fifth of a six-day hearing on the Rainey bill repealing that part of the Spanish war revenue act which imposes a tax of four cents on a barrel of mixed flour and requires the blender to place a stamp on his product so as to attach an odium to it not unlike that placed on the Jew by the requirement of the old English law that he wear three badges. It is almost an insult to the intelligence of the reader to say the saving was done by Dr. Harvey W. Wiley, the man who has made possible the continuance of the American race by his efforts in behalf of "pure food"—usually on the side of trade controversies that was able to support the largest lobby.

In that saving he was assisted by John Lind, former governor of Minnesota, former member of congress and lately noted for his ability to remain long in Mexico as the president's representative, and return to the United States and resume its ordinary avocation without having given the public, which paid his bills, one idea as to what should be done by the United States in dealing with Mexico. Mr. Lind was attorney for the wheat flour millers and Dr. Wiley chief shudderer for them. T. E. Lannen represented the corn products interests and, if a layman may be indulged in expressing an opinion, T. B. Wagner, of the Corn Products Refining Co. and spokesman for the American Manufacturers' Association of Products from Corn, was the chief witness for the corn products people who desire the repeal of that law so that they may have the privilege of mixing corn flour or corn starch with wheat flour so as to be able to place a commodity on the market that can be sold for less than the price of all-wheat flour, at times when wheat is high, and will be just as nutritious as the ordinary wheat flour, made by blending the product of different kinds of wheat.

Mr. Lannen frankly avowed the desire of the corn products people to remove the stigma placed upon corn by the requirement that internal revenue agents shall supervise the mixing and the product shall bear an internal stamp, which, according to one of Lind's incidental remarks, will show the ignorant darkey or the non-reading foreigner that there is cornstarch in it and cause him to say, "That doesn't go."

Lannen charged, and Lind indirectly proved the truth of his charge, that the object of all the opponents of the repeal of the law is to assure a continuance of the popular misunderstanding that cornstarch is a deleterious substance because starch and glucose are made by the same people and that glucose is made by using sulphuric acid. Lind used the term "glucose starch" and got a sharp call from Mr. Wagner, who said that while he has been in the business for seventeen years he never before heard that term. In fact Lind, whenever possible, dragged in the insinuations that have been made against corn syrup and every other food product that is the result of scientific progress. In his call of the former governor Mr. Wagner said:

The long and short of all the testimony given yesterday and the day before is that the imposition of the tax upon mixed flour containing a product of the corn is a discrimination against corn. What else does the reference by Gov. Lind to cornstarch as "glucose starch" mean? I have been a manufacturer of cornstarch for 17 years and never heard of this term before. Why does he go out of his way to coin this name? Does he wish to intimate that cornstarch is a product made from glucose? If so, let me tell him that Thomas Kingsford built his famous cornstarch factory at Oswego long before glucose was manufactured in this country.

Mr. Lind: Since you have spoken of me personally, did Thomas Kingsbury make an ounce of starch by the process that you are making it today?

Mr. Wagner: Yes, sir; by identically the same process; by the wet milling process.

Mr. Lind: Oh, are you making this by the milling process?

Mr. Wagner: Yes, sir.

Mr. Lind: You are not making your starch by the wet process?

Mr. Wagner: We are. It is a wet milling process, a common, well-known manufacturing operation, not typical of our industry particularly, but practiced by a good many industries.

Dr. Wiley opposed the term "mixed flour," although as chief of the bureau of chemistry he approved it. He simply said he had approved many things while he was chief of the bureau for which he is sorry.

What he tried to make the committee believe is that mixing corn flour with wheat flour is an adulteration and that the mixture should be labeled a compound, rather than a mixture, because, as he asserted, the words "mixed flour" convey the idea that the mixture is a combination of flours made from different kinds of wheat—and that notwithstanding the fact that under the Rainey law it will be necessary for the label to show the percentages of wheat and corn flour, or cornstarch, which, more than one witness explained, is merely a refinement of corn flour, even as wheat starch is a refinement of wheat flour.

Wiley wept—not by really opening his tear ducts, but in a rhetorical sense, by saying that starch is a mere maker of heat, while the gluten in wheat repairs the waste of the body. Therefore, he said, the proposal in the Rainey bill is to subject the poor devils in the south who have had pellagra from confining their diet too closely to "hog and hominy," by proposing to allow millers to mix corn and wheat flour, and label their packages so that everybody will know the fact, without being subjected to the odium that is now attached to the process by reason of the government inspection and revenue stamp. Mr. Lannen, on more than one occasion, pointed out that the object in all such legislation is to convey the idea to consumers that the product is not exactly a thing to be consumed without caution; that that is the object of the oleomargarine law and it is accomplished because most people are afraid to use something the production of which the government has indicated it thinks it should supervise.

Wiley also wept because, as he asserted, starch is not a food for growing children because it will not build bone or muscle but will merely give a grown man the energy he needs to go out and work hard.

Seizing on the talk of preparedness, the former chief of the bureau of chemistry tremblingly asked what would be the use of calling the Americans to arms if this "adulteration" of wheat with the cereal on which the original Americans lived was to be allowed. Then he pinned a few medals on himself, saying:

"Now, Mr. Chairman, I have been in this fight for 40 years, a fight for the purity of foods. I have studied as well as I could all the laws of dietetics, and I want to warn you here, as one who knows something of this question, that the introduction of starch into the flour of this country is a threat to the very efficiency and welfare of the Nation, as well as the undevelopedness and the lack of resistance of each individual who eats this product. And if it is not to be eaten, if there is no market for it, there is no use of going to the trouble of making a law about it. You may rest assured that there are plenty of people in this country who will eat this adulterated article, and in eating it they will suffer just to that extent in the building up of their bodies.

"You may feed a child a shipload of starch, it will never build a single iota of any tissue except fat. It will never make a fragment of tooth or bone or nerve or muscle or brain particle or skin or hair or nail.

"And of all people the children are the ones that in the first instance must be protected against the danger I speak of,

and unless we give the children of this country the nourishment which adulterated flour will not give, we will not achieve a manhood worthy of the country.

"All I say is do not take a step which will mean adulteration of one of your principal foods; do not take a step which will threaten the life of the people of this country."

Among the other witnesses were C. B. Keither of the internal revenue commissioner's office, who said the revenue collected from the tax on mixed flour has averaged \$3,322 per year during the 18 years the tax has been on the books; Col. Ascher Miner of Wilkes-Barre, Pa., speaking for the white corn millers, who is himself a wheat miller and was one of those who protested against the unfair competition the wheat millers found in 1895 when barytes and cornstarch were used in such a way that the adulteration was not easily detected; he said the tax is unfair, an unfair discrimination against corn, unwise, unnecessary and injurious; J. H. Gernung of the American Hominoy Co., of Indianapolis, who said he desires corn flour of the odium now attached to it.

Then came Mr. Lind, who said this is a quarrel between the chemical process corn miller and the wheat miller and thereby laid the foundation for the direct contradiction by Mr. Wagner. He said the chemical miller wants a larger market; that there never has been between the mechanical corn and wheat millers and the only reason for referring to the product of corn as corn flour is so as to use it as an adulterant for flour. He tried to make the committee believe the word flour means only wheat flour, although his only authority for that declaration is a letter written by Secretary Houston and thereby put himself into conflict with the dictionaries' laws and commercial terminology. He said corn flour is merely corn dust, a by-product, in making other corn products. He also asserted the Rainey bill, if enacted, would place corn beyond the food and drugs act.

Chairman Rainey asked if the desire was not really to put an odium on cornstarch as an impure thing? Mr. Lind said the wheat millers have not been hurt by the misnomer as he said corn flour is.

Miss Helen Boswell, chairman of the political science committee, Miss Laura Cauble, a special investigator, Albert S. Rockwood, attorney for the National Wholesale Grocers, Prof. John A. Wesener of the Columbus Laboratories at Chicago, and Prof. George L. Teller of the same institution favored the repeal. Frank H. Tanner of the Ohio Millers' Association said "we want only honest flour," therefore he said he is opposed to repeal. Harry L. Haskell of the National Association of White Corn Millers said the law is a discrimination against corn. He objects to both the tax and the red tape which must be unwound by the man who wants to mix wheat and corn flour.

Mr. Wagner, before mentioned, followed Mr. Haskell and occupied the stand for the whole day, giving the committee much light on the subject. When Mr. Lind started to ask his questions he politely asked the former governor to say whom he represented. Mr. Wagner had no apologies to make for the business in which the company for which he works is engaged. He said the prosperity of the corn grower is intimately bound up in the prosperity of the corn products manufacturers. They are the largest cash buyers in the country.

E. M. Kelly of the Southeastern Millers' Association opposed repeal on the ground that the small millers in that part of the country will not be able to compete when the mixed flour is added to the list of flour standards. W. H. Wearen of the Central Kentucky Millers' Association also spoke, as he said, for the small miller who cannot hire chemists, to tell him the proper percentages of mixtures. J. B. McLeMore, secretary of the southeastern association, said the government requirements are not burdensome, so he opposed repeal. E. C. Hutchinson, a congressman from New Jersey, said the repeal of the law would make adulteration easy. Others who opposed repeal are A. P. Husband of the Millers' National Federation, Representative Young of North Dakota, E. C. Faircloth of the American Bread Co., blenders of soft wheat flour, Samuel Plant, a St. Louis miller, and A. J. Hunt of Arkansas City and E. F. Schoening of Columbus, Ill.

ELTON FULMER KILLED IN WRECK.

The world of food control was shocked and grieved to learn of the untimely death, on February 20th, of Elton Fulmer, state chemist of Washington. Prof. Fulmer was killed in a railway wreck when trains of the Northern Pacific and Northern Pacific-Burlington collided at South Cheney, Washington, seventeen miles from Spokane.

On the body of Prof. Fulmer was found an accident insurance card providing for \$25,000 insurance in case of death on the trip. The policy was obtained just before he boarded the train at Pullman, Washington. Prof. Fulmer was for years the state chemist of Washington and was one of the best



THE LATE ELTON FULMER.

known figures in the history of food control and legislation in the United States. He was at one time a member of the Standard Committee of the National Association of State Dairy and Food Departments and in this connection performed valuable services to the country.

His loss may truly be regarded in the light of a calamity and though others may come in time and will fill his place the work done by him will long remain a monument to efficient and faithful service.

CANADIAN FISHERMEN SEEK CONCESSIONS.

At a conference of British Columbia fishermen and the Dominion fisheries inspector at Prince Rupert recently the fishermen asked for and received promises of consideration of concessions whereby northern British Columbia waters will yield greater annual catches than heretofore, their requests being:

- (1) Licenses for catching herring, to cover district;
- (2) halibut fishermen to catch their own bait;
- (3) salmon licenses to be granted British subjects;
- (4) abolition of boat rating;
- (5) cannery licenses to be open to any applicant, with no restrictions on numbers;
- (6) removal of restrictions on exportation of crabs or other fish;
- (7) appointment of two residents of Prince Rupert on the Dominion advisory board;
- (8) appointment of a district inspector;
- (9) removal of the limit to the number of lines a trawler is allowed to operate;
- (10) abolition of licenses to canners for exclusive rights to fish creeks.

Reports submitted at the conference show that the salmon runs of northern British Columbia are keeping up better than those in Alaska or along the southern coast of the province.

Continuing Food Guarantee Held Good by Court

A DECISION recently rendered by the United States District Court for the Northern District of Illinois on the subject of continuing food guarantees, will prove of interest to readers of this journal.

Some years ago Glaser, Kohn and Company, a Chicago Manufacturing concern, gave the following guarantee to the Steele-Wedeles Co., Chicago jobbers:

Gentlemen:—Replying to your favor 10th inst., would say we hereby guarantee that all goods as furnished you hereafter will comply with the Food and Drugs Act of June 30, 1906, with the understanding, however, that if we at any time use labels or packages furnished by you or gotten up as per your instructions, we shall not be responsible for the form or wording of the same, but only guarantee that goods covered by same are not adulterated. It is expressly understood that the above shall hold good until notice of revocation be given in writing. Yours truly, Glaser, Kohn & Co., G. D. Glaser, Pres.

Within the past few months preserves found in possession of the Steele-Wedeles concern, which had been sold this company by Glaser, Kohn and Company, were declared by government inspectors to be in violation of the Federal Food and Drugs Act. Steele-Wedeles, upon being approached in the matter, showed the above guarantee and the government proceeded against the manufacturers of the product. Follows the opinion of the Court:

Section 9 of the act approved June 30, 1906, reads as follows, viz.:

Sec. 9. That no dealer shall be prosecuted under the provisions of this act when he can establish a guaranty signed by the wholesaler, jobber, manufacturer or other party residing in the United States, from whom he purchased such articles, to the effect that the same is not adulterated or misbranded within the meaning of this act, designating it. Said guaranty, to afford protection, shall contain the name and address of the party or parties making the sale of such articles to such dealer, and in such cases said party or parties shall be amenable to the prosecutions, fines and other penalties which would attach, in due course, to the dealer under the provisions of this act.

It will be seen that this section does not, in terms, seem to comprehend a general continuing guaranty, but seems to apply to the specified articles contemplated at the time. Such, indeed, is plaintiff in error's contention. That construction, however, is narrow and not in accord with the spirit of the act, which should be construed in the light of its purpose. This purpose the court, in *United States vs. Antikamnia Co.*, 231 U. S., 654-665, declares "is to secure the purity of food and drugs and to inform purchasers of what they are buying. Its provisions are directed to that purpose and must be construed to effect it." As between a dealer to whom the purity of the goods is guaranteed and the manufacturer who has the better opportunity of ascertaining the facts, the act aims to throw the ultimate responsibility on the latter and it should, therefore, be interpreted, if reasonably possible, so as to carry out this purpose to the fullest extent. In our judgment it is, therefore, not only a fair, but the most reasonable construction of the act to include within the scope of Section 9, continuing guaranties as well as those given at the time of the sale and in reference to specific goods. The belated position of plaintiff in error as to the meaning of the statute with regard to a continuing guaranty comes to us undermined with its earlier construction contained in the letter wherein it says "we hereby guarantee that all goods as furnished you hereafter will comply," etc., and "It is expressly understood that the above shall hold good until notice of revocation be given in writing." There is no reason in law for the claim that a continuing guaranty is invalid.

When by the terms of a written guaranty it appears that the parties look to a future course of dealing for an indefi-

nite time, or a succession of credits to be given, it is to be deemed a continuing guaranty. Letters of guaranty should receive a liberal, fair and reasonable interpretation, so as to attain the object for which the instrument is designed and the purpose to which it is applied.

We are clearly of the opinion that the letter of January 15, 1907, constituted a good, valid and sufficient guaranty under the provisions of said Section 9, and that said guaranty attached to every item of sale made by plaintiff in error to defendant in error, after the sale thereof until revoked in accordance with the terms thereof, and that it furnished a basis for the filing of the information against plaintiff in error herein.

AMEND NET WEIGHT REGULATIONS.

A modification of the regulations for marking the weight or measure of the contents of food packages has been announced recently by the United States Department of Agriculture in Food Inspection Decision 163. This decision allows the use of fractions in indicating weight and measure when there exists a definite trade custom for their use. Under previous rulings a package containing one-half gallon should be marked as two quarts, but now it may be marked as one-half gallon. This decision permits the trade to follow in this respect established customs of marking, if the marking is plain and conspicuous and in no way misleading to the consumer.

The decision permits the use of the metric system in marking food packages, when this system is preferred, and specifies the terms in which weight or measure should be stated when the metric system is used. The decision follows:

Regulations 29 of the Rules and Regulations for the Enforcement of the Food and Drugs Act is hereby amended by striking out paragraphs (d) and (e) and substituting therefor the following:

(d) If the quantity of the contents be stated by weight or measure it shall be marked in terms of the largest unit contained in the package, except that, in the case of an article with respect to which there exists a definite trade custom for marking the quantity of the article in terms of fractional parts of larger units, it may be so marked in accordance with the custom. Common fractions shall be reduced to their lowest terms; decimal fractions shall be preceded by zero and shall be carried out to not more than two places.

(e) Statements of weight shall be in terms of avoirdupois pounds and ounces; statements of liquid measure shall be in terms of the United States gallon of 231 cubic inches and its customary subdivisions, i. e., in gallons, quarts, pints, or fluid ounces, and shall express the volume of the liquid at 68° F. (20° C.); and statements of dry measure shall be in terms of the United States standard bushel of 2,150.42 cubic inches and its customary subdivisions, i. e., in bushels, pecks, quarts, or pints: Provided, That statements of quantity may be in terms of metric weight or measure. Statements of metric weight should be in terms of kilograms or grams. Statements of metric measure should be in terms of liters or centiliters. Other terms of metric weight or measure may be used if it appears that a definite trade custom exists for marking articles with such other terms and the articles are marked in accordance with the custom.

Preliminary returns from practically all operating sugar factories in the United States indicate a production of 866,200 short tons of beet sugar during the current campaign. The area harvested amounted to 624,000 acres, and the best yield was 6,462,200 short tons. This is the largest acreage and tonnage of beets ever harvested in the United States, and the sugar production exceeds the highest preceding crop, that of 1913, by nearly 133,000 tons.

THE WHOLESALE GROCERY FIELD

ALL THE MANUFACTURING AND JOBBING NEWS WORTH PRINTING

CANNED FOODS REVIEW.

By Canticle.

General Condition.—February was a good month for the distribution of canned foods and the average of weather and shipping conditions was favorable to an actual and heavy distribution.

The severe weather during January froze up enormous quantities of imported fruits and vegetables, thereby bringing the demand for canned foods to the front and creating an activity of distribution very satisfactory to the dealers and canners.

Canned Tomatoes.—There has been a reaction in prices and a decline of about five cents per dozen in No. 3 and No. 2 standard tomatoes each and the Chicago and other markets have conformed to the decline.

Maryland is making a price of \$1.00 per dozen for standard 3s and 77½c a dozen for standard 2s tomatoes f. o. b. canneries and Chicago holders are quoting in a large jobbing way at \$1.05 and 82½c warehouse Chicago, which is proportionately lower than the Eastern prices. Holders of warehouse stock in Chicago are taking their profits on goods bought early at lower prices. No. 10 tomatoes are in some request and a few lots have changed hands in Chicago at \$3.25 to \$3.50 for standard grade according to quality. No buying of the size for shipment to Chicago is possible at the present comparative prices.

Future tomatoes are selling pretty well, much more so than at this date last year and the price basis is 60c for 2s standard and 80c for 3s standard f. o. b. Maryland points. Indiana is strong at 85c cannery for 3s future and is a reluctant seller at that price.

Canned Corn.—Since the naming of future prices by the big Western canners of corn at the Louisville convention or about that time quite a large business has been done in futures by the brokers on a basis of f. o. b. cannery, 65c for standard, 70c for extra standard and 75c for fancy corn packed in Illinois or Indiana.

Purchases have been largely confined however to well known packs from which the big jobbers secure their private label qualities out of the 1916 production.

Country Gentlemen goods of corn is very scarce west. In truth the canning of it has been very much reduced and in some localities entirely abandoned. It is very difficult for a canner to get this variety into the cans in proper condition and most canners are "gun shy" of Country Gentleman canned corn.

Canned Peas.—There has been a heavy movement of peas and enormous quantities have been sold.

The prices are so low that consumers have substituted canned peas for both tomatoes, which are high, and for corn.

The substitution is regarded as one of the reasons for the reaction of prices on canned tomatoes and the inactivity of canned corn.

All classes of people understand canned peas. The foreign or European element of our population is fond of peas and knows how to use them to advantage as well as canned tomatoes, but that element is very ignorant of the value and use of canned corn and will not use it. It is not grown to any extent in Europe and is therefore an unknown food product to hundreds of thousands of our population.

General Items.—Canned salmon and sardines are watchfully waiting for the opening up of the spring demand with the advent of warmer weather. There is a good movement of canned fruits and asparagus. String beans are selling well and so are green lima beans. Canned apples are in slightly better request. Spinach is moving out nicely and berries and cherries are already scarce for some goods. Kraut, pumpkin, squash are all quiet but with some demand in evidence. The market generally can be quoted as quiet but firm.

DRIED FRUIT MARKET REVIEW.

By Veritas.

The demand for dried fruit during the month of February was quite above the average. The Coast reports that the demand has not been confined to any particular locality, but has come from all parts of the country, as well as the foreign markets. Notwithstanding the difficulties attendant upon shipments to Europe, there has been a very fair demand from that source, especially for prunes and apricots.

Prunes.—The only sizes on the Coast today of any consequence are 50/60s and 60/70s. 40/50s are in light supply, 70s, 80s, 90s are practically exhausted. The prune market, because of the light holdings, especially on the sizes 40s, 70s, 80s and 90s, is very strong and will without doubt advance. There has been little or no change in the basic price on 50/60s and 60/70s, owing to the fact that these two sizes are in fair supply. March is a big consuming month on prunes and it is the general opinion that we are going to see a strengthening in values. The sizes left, 50/60s and 60/70s, are desirable sizes and at the basic price ruling today, will be in demand. With only a normal consumption, the present holdings of prunes, both on the Coast and in jobbers' hands, will clean up long before new crop is available. Prices ruling today are from ½ to ¾ cent per lb. below those of a year ago at this time.

Peaches.—Prices on this item continue on a low level, although quotations ruling today are a cent to a cent and a half per lb. higher than those ruling prior to the first of the year. The holdings of peaches in California today are below normal and it is reported that stocks in jobbers' hands and throughout the East are closely concentrated. There has been a fair demand for peaches for shipment from the Coast during the last month. No doubt, the low ruling prices are responsible for the increased consumption. There is a movement on foot in California to organize a Peach Association, somewhat along the lines of the Raisin Association, with the view of elevating values. There is not a question of a doubt that peaches have been sold for the past two years below the cost of production. It is the intent of the new association to guarantee the growers 5c per lb. for orchard run peaches. This would mean a price of not less than 6½c for Choice in 50-lb. boxes f. o. b. Coast, provided the crop should be a normal one. If, however, the crop should turn out short, the price would easily be a cent per lb. higher. Even this would not be an abnormally high price, and would not in any way curtail consumption, as peaches would still be a low priced dried fruit.

Apricots.—Stocks in California are practically cleaned up. There are very few in packers' hands and it is the general opinion that jobbers' stocks are light. Holdings on the Coast

are confined to one or two of the large packers. The stock is not more than sufficient to carry through the spring consuming period; in consequence, the market is very strong, and there is every indication of higher prices on all grades and varieties of apricots.

Raisins—The Loose Muscatel situation remains unchanged. This also applies to seeded Muscatels. The seedless situation, however, is very strong. Bleached Thompson Seedless are absolutely unobtainable. So far as California is concerned, unbleached Thompsons are unobtainable, although there are a few holdings of unbleached Thompsons in the hands of jobbers, but the stocks are very light and will clean up in the very near future. The only seedless varieties of raisins obtainable today are Sultanas and One Crown Floated, both of which are in light supply. The trade will undoubtedly turn to seedless Sultanas and One Crown Floated. This will, without doubt, cause a strengthening in the market on these varieties of seedless raisins.

Currants—The currant market in Greece remains very high. The 1915 crop is practically exhausted. Supplies in this country are just about normal and our markets here on a parity with the Greek market. The high price of currants, the scarcity and high price of seedless raisins is causing the trade to turn to seeded raisins. We are having an unusually big demand for bulk and package seeded Muscatels.

Figs—There has been quite a little activity in this item in the past week or ten days. It's a big spring item. Users this year will be obliged to depend entirely upon the California variety. There are no foreign figs in this country. California varieties, Adriatics and Calimyrnas, are closely cleaned up. The demand that we have had for the past week or ten days has strengthened the market a quarter to half a cent on Adriatics. The general opinion seems to be that this year we will not receive any Symrna figs, with a result that California has opened prices on new crop Calimyrnas and Adriatics on a much higher basis than that of last year. Quite a few sales have been reported at the opening prices, with the result that some packers have advanced their ideas and others have withdrawn from the market.

March, April and May are the best consuming dried fruit months of the entire year. Conditions this year are favorable for a consumption quite a little above normal. The trade who anticipate their requirements and feature dried fruit during these months will enjoy an increased profitable volume of business.

SALT FISH MARKET.

There has been an advance of one dollar a barrel on all kinds of Yarmouth herring since our last report. The Scotch cured herring that are produced in this country are now selling well, as they are much less in price and are good quality and value.

Immense quantities of the Yarmouth herring are now being packed in kegs, both mixed and milkers, and are selling rapidly, and people like them fully as well, if not really a little better than the genuine Holland herring, because they are fat, white meated and fine. Some trade for these as well in the larger size packages.

There has been a little move in the salt mackerel market all over the country. New York and Philadelphia report large sales having been made within the last thirty days. The demand has been especially good in this market on the smaller sizes, which are now pretty well cleaned up. There have been some especially fine Norways No. 5's that came into this market recently, which have been selling readily at \$20.00 per barrel. The large Cape Breton Bloaters or No. 1's, are the poorest sellers of mackerel and this is due to the size of the fish more than to the price, as the average dealer will not buy mackerel weighing as much as two pounds, as they are too large for family trade.

Gibbed herring are moving well and the market is very firm.

The item of salt salmon has been selling well in this market of late, due largely to the advanced price on the coast and the scarcity of the various quality of salmon.

Split herring are getting scarce in the east, especially of

the medium size, and we have heard sales were made as high as \$7.00 during the last week. This is for a guaranteed 200-pound barrel.

On account of the scarcity of the genuine Norwegian Belly-cuts there have been quite large quantities of these goods domestically cured and sold in this market. In appearance they look very much like the Norwegian article, and are the same size and quality as the sardines that are packed on the Maine coast in $\frac{1}{4}$ oils. The barrels do not contain as many pounds net as the Norwegian packages, but neither are they anywhere near as expensive. A great many of these goods have been packed this year with just the heads cut off, leaving the belly, which makes a difference of about \$3.00 a barrel in the commercial value of the goods; but both are one and the same thing.

Boneless herring are a little firmer and are now worth about 95 cents a box for the best quality. There are some cheap lots laying around that can be bought as low as 85 cents.

Genuine bristling anchovies are in demand, but there are not many coming forward and the prices rule high.

The most interesting of all is the item of Norwegian Sardines. We quote from a recent letter from Norway:

"The fishing of raw products of sardines and herring has since Christmas been very dull and during this time the factories have not had anything to pack, but recently the fishing seems to have picked up a little and factories are beginning to pack again.

"The export to Germany is still going on and prices are continually rising. For small herring packed in $\frac{1}{4}$ Dingley tins in olive oil and counting from 6 to 10 fish per tin, in one layer, today are bringing 39 kroners per case of 100 tins f. o. b. Norway."

Of course this price is entirely too high to interest the American market and the goods are not packed in the manner the American trade require.

"The manufacturers and packers of Norway are still negotiating with the British government in regard to bringing about a new arrangement concerning the export to Germany of fish products, and it may be possible that some arrangement will be made whereby shippers will not be able to send their goods to Germany any longer, and if this condition does develop, it should have a tendency of course to reduce the price of the sardines." It is to be hoped that this will take place.

The new pack of fat summer bristling will not take place until July or August, which means August delivery at the earliest on these goods in this country, and in the meantime the few limited stocks that are held will bring fancy prices. If one was to import these goods today direct from Norway, they would cost about \$13.00 a case to land in Chicago. We understand there are several small lots that are being yet sold as low as \$11.00 a case for strictly summer caught fancy fat bristling and they certainly are a bargain.

Lent begins in another ten days and the next few weeks should be good weeks in the fish business in general. Trade as a whole has been satisfactory, but not as good as it might be.

D. H. LANE CO.

MONTHLY SPICE LETTER.

The market continues very active and still unsettled. Many articles are very much higher than prices in effect last week. Changes have been rapid and higher prices are predicted on many articles.

PEPPER. The situation is a critical one. There is not sufficient pepper here to meet the urgent demand. The embargo by the English government has further complicated matters. We look for very high prices on pepper over the year. Many predict that the laid down cost will reach 24 to 25c.

RED PEPPERS. In very large demand and are distinctly firmer. In our opinion this is to be a year of extreme prices.

CLOVES. Practically unchanged; in fair demand.

PIMENTO (Allspice). Very much firmer and higher prices are now being quoted. Demand very good.

MACE. Exceedingly scarce and futures are again active for all grades; prices being very much higher.

NUTMEGS. Stocks here are unusually small, and have rapidly changed hands of late. We have had some startling advances during the last week and higher prices are predicted.

CASSIAS. China grades very much higher; freights and the unsettled political conditions in China all contribute to the change in values. Spot stocks here are unusually short. Saigon grade also scarce and in normal demand.

GINGERS. Futures are all very active. Prices, however, are unchanged generally.

TAPIOCAS. Are very firm and prices not likely to be lower for many months.

PAPRIKA. Market steady and firm. Stocks here are very small. Present import cost figures higher than prices prevailing in our market.

SEEDS, HERBS, ETC. Nearly everything in the list is active and in urgent demand. Prices have greatly advanced. Caraway and poppy, as well as mustard, higher and likely to reach record figures. Sage, thyme and turmeric are also very firm and in active demand, with an upward tendency.

McCORMICK & Co.

Intimate Study of the Chain Store

By JAMES HEWITT

President Tri-State Wholesale Grocers' Association.

WHEN I was a boy it was a common saying, "Watch the grocer that has two stores, and if he has three, beware of him." But as with many other ventures the failures revealed the defects and today there has been perfected a system of chain stores that is estimated to be doing a volume of business approaching \$150,000,000.

More business, greater distribution, lower prices, quick "turn-overs," sales for cash, no losses from bad debts, are the mainsprings that actuate this business. Our great chain stores are manned by keen, alert, active men, who have grown rich in the business.

There is nothing wrong in the chain store idea. As a rule the community is benefited through its ability to supply merchandise at a moderate cost. This it is enabled to do by means of its great purchasing power, economy of conducting business, sales for cash and the cutting off of a costly delivery service.

As far as my observation has gone, the chain stores are buyers of good merchandise and none are more careful in seeing that they get what they buy. No overcharging is allowed. If by any chance this happens a prompt restitution is made to the purchaser, and the manager making the overcharge is called to account. This competition has done much to stimulate the individual grocer to more active exertions to protect his trade; to see that his store is attractive in its appearance, to watch his expenses, to scrutinize his credit accounts, to see that his customers are pleased and give them a service that insures their returning to deal with him.

The retail grocer was quick to see the danger of the chain stores to his business, and in order to meet the competition of low prices formed the scheme of co-operative buying so as also to receive the lower prices for goods bought in larger quantities.

While the chain stores were in the process of development the wholesale grocer enjoyed their patronage and was more or less indifferent to the fate that confronted the individual grocer. He was for the time being blinded by the large sales he made. But the time came when the chain stores became so strong that they were able to go over the head of the wholesale grocer direct to the manufacturer and he was forced to realize that his trade with them was gone.

Turning again to the individual grocer for trade he found that he, too, through his newly formed association, had found the way of supplying many of his wants outside of the wholesale grocer, i. e., by buying in quantities from the manufacturer and reaping the benefits of lower cost.

To the wholesale grocer was left the retailer who was slow pay and who could not afford to take advantage of paying cash for his merchandise. Consequently the jobber's business had to take on to a larger degree than ever the extension of credit with its larger percentage of losses. His better class of customers confined their purchases to the merchandise upon which credit was desirable and spent their ready money with their own association.

The wholesale grocer was now confronted with the great problem of how shall he adjust himself to these new conditions. It was quite evident that he, too, must go through a process of development.

He could not change the new condition if he would, for this new business was founded on a good, sound, economical basis.

In his first effort to adjust himself the wholesale grocer allowed his resentment against the manufacturer for selling these associations to have free course. He informed the manufacturer that he could not sell him and his customers, too. Determined efforts to keep the manufacturer from such selling, while it resulted in some success, was as a rule a failure. The wholesale grocer had lost the trade of the chain stores and now he found that the trade of the wide-awake independent grocer was being sought by the manufacturer through their co-operative buying association.

This condition of affairs quickly had its effect upon the wholesale grocer's salesmen. They found that they could not compete and consequently refused to offer for sale various staple articles of merchandise, leaving the field for such goods largely in the hands of the buying associations.

The manufacturers, while preferring to deal with the wholesale grocers, saw their trade with them diminishing and consequently were compelled to bring in a new force; a large corps of specialty men whose business it was to see that distribution was obtained. As chain stores and retail buying exchanges were open to these specialty men, it became quite natural that they received the greater benefit of their work. The manufacturer must have distribution and theirs was the easiest channel to obtain it.

And so their specialty men would openly recommend buying through the associations so that the buyer could secure the advantage of lower prices.

Such was the condition of affairs with the wholesale grocer and is much so even yet. But resentments, antagonisms, jealousies and boycottings are not the weapons to bring success and the sooner we confess it the better off we will be.

After the chain stores had their wonderful growth and the retailers had established their associations, then the wholesale grocers began to form associations. This was another step towards meeting the changed conditions. This step broadened their horizon, the merchants became acquainted with each other and questions affecting their business were freely discussed.

The effect has been to make the wholesale grocer a better merchant and to teach him to take a wider view of matters and lift him out of petty jealousies and fear of his competitors.

Now let us remember that all three methods of distribution are legitimate, chain stores, buying exchanges and wholesale grocers.

While any one of these three methods might resent the competition of the others the question which interests us is,

how can we wholesale grocers meet successfully these conditions?

What should be his attitude toward the chain stores? To sell them all he can. Whenever there is a chance to do business with them, seek it. They are large distributors and frequent buyers and they will resemble the "nimble sixpence" in your business.

What about the buying exchanges? Sell them also all you can. There are many opportunities when changes in market conditions will show you a profit in the transaction.

Both these organizations are in the business world to stay, and the sooner we recognize this fact the better it will be for all concerned.

What about the individual retail grocer himself?

Do all you can to help build up his trade. First impress him with the importance of the right use of his credit. You do him a great deal of harm in giving him an undue time to pay his bills. It will eventually undermine his business. You do both him and yourself harm in allowing discounts for cash beyond the appointed time for such discounts. You are making him and yourself a poor merchant. Carelessness in paying bills leads to indifference as to price paid for merchandise and the greater profit asked in the sale to the retailer either is lost in his eventual failure or in diminishing his power of distribution. I cannot emphasize too much this evil of extended credit. The chain store has a wonderful advantage in this matter, which sells only for cash. He is a wise retailer that learns the lesson that prompt payments are his salvation. Prompt payments to him means prompt collections from his customers.

Largely the associations have been brought into existence because of the failure or inability of the individual jobber to assist the retailer to withstand the competition from the chain stores.

This is unfortunate, as it has created buying organizations that cut deeply into the business of the city jobber and which in some instances at least seek to have their members believe that their jobbers are unfriendly to them. They have also hurt the manufacturer and this has compelled him to employ an expensive staff of salesmen first to sell the goods to the associations and then to go out on the street and sell their members because the manufacturer has lost the personal service of the wholesale grocers' salesmen which is a most valuable asset.

The next step in the changed conditions is that we be willing to learn from our competitors. We have seen the great advantage of co-operative buying and why not take advantage of it ourselves?

There is no reason why the wholesale grocers of a community should not unite in their purchases and secure whatever advantages may be had in so doing. There are advantages and I venture to say surprisingly so in buying together—look at the freight rates saved and consider the desire of the manufacturer to secure large orders at once and prompt cash in return.

The fear that one of the members of the buying community may take undue advantage of his purchase by underselling is overcome by the growth of a mutual confidence in one another, and a general understanding of a minimum selling price.

The wholesale grocer has to offer the manufacturer a great advantage. He possesses the widest distribution. Take a body of wholesale grocers who unitedly have several hundred salesmen and let them throw off any indifference heretofore shown towards a manufacturer's products and become boosters of same—what price would not a manufacturer pay for such a changed condition?

In Philadelphia we have demonstrated this power—a number of times this winter—with much advantage to ourselves and the manufacturer.

Our salesmen, knowing that their firms are now acting as a unit, have taken hold of the merchandise offered and pushed it with much enthusiasm. This feeling is fostered by the wholesale grocers meeting with them at a dinner and discussing plans of campaign. Last September we in Phila-

delphia had such a meeting that was quite enthusiastic and next February we will gather again, wholesale grocers and salesmen, some 400 in number, to review our work and gather fresh energy.

Heretofore the salesman has occupied a sort of secondary position, one who was trying to get an extra profit wherever obtainable in whom too much confidence would be misplaced.

The salesman now goes to his customer and says in effect that he is ready to help him to secure his merchandise so as to enable him to compete with his neighboring chain store.

The change is electric—we have made a new salesman—assured of his ability to sell—a retail merchant with renewed confidence in the salesman and a manufacturer glad to see his merchandise being distributed through the natural channels once more.

In the cities the days of long credit are gone. If a retailer wishes to stay in business he must curtail credit given to his customers and meet his own obligations promptly. His own buying exchanges have taught him this.

The jobber's salesman now being in a position to sell is soon found to be a valuable aid in other ways, helping the grocer with seasonable goods, giving valuable hints as to the care of goods and their display. He will show him the advantage of the proprietor's presence in his own store, and his executive ability as compared with the average manager of a chain store, and the untold value of a prompt, courteous, clean, reliable service.

We in Philadelphia are now working along the lines indicated.

It is not yet an Arcadia with us, but we have traveled very fast these past four months, overcoming objections and developing friendliness towards one another. Each wholesale grocer stands on the common plane and works unitedly towards the common end—the establishing of the retail grocer on a sound basis—merchandise economically handled and intelligently distributed with an equitable return upon the amount invested.

Our purchases are made as one, and our salesmen are well informed as to the cost. We find that the manufacturer is glad to have the co-operation of our men who in their turn show their appreciation by selling the goods. Credit lines are drawn sharply and the retail grocer is receiving full value for his investments and the help of a body of men whose own welfare is wrapped up in his success.

ENGLAND'S CHICORY HIGH.

Previous to the war there were four or five large firms located in the chicory districts of northern France and southern Belgium, which bought up raw chicory, and, after manufacturing the article, supplied it to dealers and merchants in all parts of France, Belgium, and the United Kingdom. It was manufactured on the spot because an appreciable per cent, by weight, is lost in the process, and transporting the raw root to distant points involved a loss.

On the outbreak of the war it was believed that the chicory districts would probably fall within the fighting zones, and in great haste the 1913 crop, most of which was gathered in October of that year, was sent to Dunkirk, France. About nine-tenths of the chicory being imported into England is coming from this Dunkirk store, and a small steam vessel, regularly engaged in the trade, is carrying on this business practically alone.

Small and negligible amounts of chicory have come in from Norway, Sweden, Denmark, Portugal, Netherlands, and the channel islands. A large chicory dealer of London states that only small parcels of the 1914 crop have come through from France. As this country imported almost entirely from Belgium, it would be reasonable to think that the supplies of chicory in England should be low, but the board of trade returns show that stocks are exceptionally high. The price for good root is also high, ranging from \$125 to \$140 per ton. In normal times chicory sells for about \$35 to \$40 per ton, and can even be bought at \$30 a ton.



Gleanings from the World of Foods



A CONFERENCE was held in New York recently between representative committees of the National Coffee Roasters' Association and the green coffee interests with reference to a joint campaign of education as to the value of coffee as a beverage. The subject was opened by President Ross W. Weir, who explained his ideas of the roasters. It was not, he said, an effort to merely strike back at the makers of coffee substitutes, but to bring forward the idea that coffee has real food value and that much said against it is not true or justified, indirectly even. It was the opinion of the roasters that the good from such a campaign was as much the concern of the green coffee interests as of the roasters, hence the appeal for joint action.

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S. W. Eckman, who for several years has been sales and advertising manager of the firm of B. T. Babbitt, New York, has resigned, and it is understood will engage in the export trade.

* * *

Statistics published by an Amsterdam newspaper indicate that the Dutch herring industry has not been prosperous in the past two years, in comparison with previous periods. The total catch of herring is stated at 589,383 tons in 1915, compared with 497,166 tons in 1914; 766,711 tons in 1913; 524,673 tons in 1912; and 638,587 tons in 1911. However, prices have increased so much since the war began as to offset entirely the reduction in the catch, so far as profit is concerned.

* * *

Announcement was made recently by the National Co-Operative Grocery Company of an increase of its authorized capital from \$200,000 to \$550,000. Of this total capital \$300,000 is to be common, and \$250,000 7 per cent preferred cumulative participating stock. M. H. Block was elected president of the company; James B. Schenck of Dayton, Ohio, is vice-president and manager of the Dayton house; George W. Platt, secretary and treasurer. The business of O. F. De Voss & Co. has been merged with the National Co-Operative Grocery Company. Additional branch houses will be started this year in the larger cities of the four states, it is said.

* * *

THE COFFEE TRADE IN EUROPE.

According to statistics furnished by Dutch importers of coffee, the visible stock on hand in the Netherlands at the close of 1915 amounted to 366,000 bags. The total in all Europe was 3,530,000 bags. The total for the Netherlands and for all Europe was somewhat less than at the end of 1914 and about half that in stock at the end of the three years just preceding the war. In France, however, the stock on hand has been practically the same at the end of each of the past five years. The stock at Havre before the war was usually about a third of the total stock in Europe, but at the end of 1914 and 1915 it was nearly two-thirds thereof.

While the stock on hand in the Netherlands has declined 50 per cent since August, 1914, the arrivals and deliveries have doubled, the arrivals in 1915 having been 3,492,000 bags and the deliveries 3,424,000. These figures are about 40 per cent of the total arrivals and deliveries in Europe, whereas before the war the proportion was only from 15 to 20 per cent.

* * *

PHILIPPINE SUBSTITUTE FOR GELATIN.

A substitute for imported gelatin is made in the Philippines from a kind of seaweed brought in by the fishermen and sold in the markets. The native women use it to produce desserts similar to those made elsewhere from gelatin. Foreigners also find it a good substitute for imported gelatin. It is similar to the dried substances brought into the islands from Japan and China, after being extracted from various kinds of seaweed by the Japanese and Chinese, dried, and marketed in the form of bundles.

The preparation of gulaman, as it is known, is not carried on in the Philippines on a commercial scale, but the dried article is imported from Japan and China and is currently on sale at the small shops. This commercial product is prepared by extracting the substance with boiling water, congealing the product, and then partially drying it before cutting into strips an eighth of an inch wide. The strips are then thoroughly dried for shipment. The yield is sometimes as much as 60 per cent. One part of the substance to 300 parts of water yields a jelly on cooling.

The amount of raw seaweed brought in now from the sea is not enough to meet the local demand for gelatin. The cheapness of the imported article prevents a greater demand for local production.

* * *

IMPORTANCE OF QUOTING DELIVERED PRICES.

The following extract from a letter from Special Agent Garrard Harris to a correspondent in Wisconsin will be of general interest, and applies to all firms contemplating business with Latin America:

"Let me urge upon you the importance of being able to quote delivered prices at the nearest port. Prices in New York mean nothing to the man in Honduras or somewhere else. If you find it difficult to quote him prices at his nearest port, just imagine how bewildered he is when he tries to find out what the goods will cost him laid down there. He has very few facilities for finding this out compared with those open to American firms.

"Put one of your bright young men to working this out. Figure the cost price laid down at Belize, at Barrios, at Port Limon, at Colon, at San Salvador, at Guatemala City. There is where Europeans have had the advantage of our salesmen. I have seen American salesmen compelled to own up that they did not know how much the goods would cost; and I have seen a German salesman go into his pocket and from a little red book not only call out what sardines would cost per case laid down in San Jose, but what each can would cost on the shelves. Get the information on every important point and then work it out. It will pay you."

* * *

CONVENTION NOTICE.

New York, Feb. 14, 1916.

To Wholesale Grocers:

The tenth annual meeting of this association will convene in Boston, Mass., June 14, 15, 16, 1916, and the Copley-Plaza hotel will be headquarters.

Every wholesale grocer is cordially invited to attend. The New England Wholesale Grocers will assure all a hearty welcome.

The convention will be preceded by a meeting of the executive committee on Monday, June 12, and a meeting of the board of directors on Tuesday, June 13.

We enclose herewith the names of some of the hotels in Boston with the rates applying during the time of our convention.

Make your reservations early and direct with the hotel, in order that proper accommodations may be provided.

Further particulars later.

Yours very truly,

ALFRED H. BECKMANN, Secretary.

* * *

HAWAIIAN PINEAPPLE PROSPECTS.

Pineapple growers in Hawaii during 1914 and 1915 are said to have sold their fruit at an average loss. Those producing this variety of fruit, and particularly those on the island of Maui, have not yet learned what price they will be offered by the canners this year, although there are indications that it will be better than during the past two years.

According to a grower in the Haiku district, island of Maui, there is evidence that the pack will not show the increase this year that it has in the past. Many small growers on Oahu have been compelled to dispose of their holdings by practical inability to sell their fruit at all, and a considerable acreage has been allowed, for this reason, to grow up in weeds. On Maui the crop will be short, both for the reason that the independent growers have not been planting heavily, on account of uncertainty as to price, and that the plantings suffered severely from incessant rains. The quality of the season's pack also may be below the normal.

In order to stimulate planting the canning companies are advancing money to homesteaders and others. This has not been reported for several years. It is done on Oahu, and on Maui the Haiku Fruit & Packing Co. is also helping to finance small growers. A homesteader in the Kuiaha tract has undertaken to plant 50 acres, and has been allowed an advance of \$100 per acre for the property. Everything to interest planting has been done. However, the output for the Maui pack for the next two or three years is estimated to be smaller than in the past.

The price paid the growers on Maui last season was \$11.25 per ton for first-class fruit, which low rate accounts for the indifference of growers in relation to extending their acreage. The new price will be announced in May. The price of canned fruit has advanced some during the year and this may benefit the growers. The total pineapple pack for all the islands in 1915 was 2,175,000 cases.

The large pineapple canneries, such as the Hawaiian Pineapple Co., Thomas Pineapple Co., Libby, McNeil & Libby, Haiku Fruit & Packing Co., and others which have large acreages of their own, independent of individual growers, had a large pineapple tonnage at their direct command throughout the year.

The Hawaiian Pineapple Packers' Association of Honolulu entered into two extensive advertising campaigns in 1915. One was a grocery-window display of Hawaiian-canned pineapples in practically every state on the American mainland, while "Hawaiian Pineapple Day," which was held on Nov. 10, 1915, called for the preparation of special Hawaiian pineapple menus in American hotels from the Atlantic to the Pacific. The statistical results of the latter campaign have been compiled by the Hawaii Promotion Committee and the Hawaiian Pineapple Packers' Association, indicating that it was satisfactory.

* * *

TRUFFLES OF PERIGORD AND SARLADAIS.

The districts of Perigord (Department of Dordogne) and Sarladais are famous for their truffles. These highly prized fungi make their appearance during the first days of August, and are gathered from then to the end of March. They are found under a variety of oak called the truffle oak (*chêne truffier*), also near the evergreen oak (*chêne vert*) and the hazelnut tree (*noisetier*).

Those who make a specialty of gathering truffles are called *caveur de truffes*. They search for them with trained dogs or pigs, the animal locating the hidden truffle by scent. The truffles are gathered every day or two and carried by the *caveur* to the nearest market town, where he sells them to commission merchants, who buy for the large dealers. The normal price for truffles is 5 francs per kilo (about \$0.44 per pound), but sometimes the *caveur* receives as much as 12 and 15 francs (\$1.05 and \$1.30 a pound).

The first-of-the-season truffles are called *truffes à la marque*, and are inferior in quality to those gathered later. *Truffes à la marque* are black outside and white inside, and have little or no fragrance. With the appearance of cold weather the truffles improve in quality and acquire a greater fragrance. The fine-quality truffle is black outside, black and gray grained inside (*noire marbrées*). The truffles grown in Perigord Sarladais possess the most fragrance, and are generally superior to those grown in other sections of France.

In 1913—the latest year for which detailed statistics are available—France exported 451,000 pounds of fresh, dried, and pickled truffles, 21,600 pounds of which went to the

United States. These shipments had an average value of \$1.31 per pound.

While truffles have been found in the United States, they may be considered nonexistent from a commercial standpoint. Europeans coming to America who are familiar with the habits of these fungi in Europe and the means employed there to collect and put them on the market are naturally interested in finding them in this country in sufficient quantity to bring financial returns, but so far no truffle industry has been developed.

* * *

SWIFT & CO. SET RECORD.

Swift & Co. had its banner year in 1915 with gross sales of over \$500,000,000, compared with \$425,000,000 the previous year. Earnings on the capital stock increased 50 per cent, being over 18½ per cent, against 12.60 per cent in 1914. Meanwhile the dividend rate in the last quarter of 1915 was increased from a 7 to an 8 per cent basis.

The profits based on the money employed in the business—that is, the capital and surplus combined—were equal to 12.55 per cent. The profit on each one dollar of sales was 2.8 cents. These facts may be summarized in the following table:

	1915.	1914.
Total sales	\$500,000,000	\$425,000,000
Net earnings	14,087,500	9,450,000
Dividends	5,437,500	5,250,000
Earned on stock, per cent.....	18.77	12.60
Surplus for year.....	8,650,000	4,200,000
Earned on capital and surplus, per cent	12.55	8.42

President L. F. Swift in his report to the shareholders said concerning the prices paid for cattle and the prices realized from the sale of the company's products:

"In 1914 we paid an average of \$7.06 per 100 pounds for live cattle and sold our beef in the principal cities for \$12.13 per 100 pounds. In 1915 we paid an average of \$7.10 per 100 pounds and sold for \$11.46. We were able to do this because we obtained more money from the sale of by-products. Compared with previous years, the additional value realized from hides, fertilizer, soap and other by-products during 1915 was greater than our entire profit on the cattle."

The annual meeting of the company was held recently and the following statement of assets and liabilities was issued:

BALANCE SHEET—ASSETS.

	Year ended Sept. 25, 1915.	Year ended Sept. 26, 1914.
Cash	\$ 8,946,755	.....
Accounts receivable	61,622,453	\$ 47,329,777
Inventory	47,901,888	54,378,198
Stocks and bonds.....	38,355,802	35,462,091
Real estate and improvements.....	50,539,539	50,434,307
Total assets	\$207,366,439	\$187,604,373

LIABILITIES.

Capital	\$ 75,000,000	\$ 75,000,000
Surplus	45,850,000	37,200,000
Reserves	5,900,883	5,809,022
First mortgage, 5 per cent.....	24,500,000	10,000,000
Bills payable	32,933,550	39,538,850
Accounts payable	21,375,755	18,619,001
Acc. div. and bond interest.....	1,806,250	1,437,500

Total liabilities

The following directors were elected at the annual meeting: Louis F. Swift, Edward F. Swift, Lewis L. Clarke, L. A. Carton, L. B. Brainerd, Charles H. Swift, G. F. Swift, Jr.

At the directors' meeting held after the stockholders' meeting the following officers were re-elected for the ensuing year: President, Louis F. Swift; vice-presidents, Edward F. Swift, Charles H. Swift, G. F. Swift, Jr.; treasurer, L. A. Carton; secretary, F. S. Hayward; assistant secretary, C. A. Peacock; assistant treasurer, W. W. Sherman.

WHY SACCHARIN WON

The Long, Contested Suit of the Monsanto Chemical Works of Saint Louis, Manufacturers of Saccharin, Is Finally Decided in Its Favor.

The Supreme Court of the State of Missouri in handing down its *unanimous* decision that Saccharin is not deleterious to health, and declaring null and void the statute prohibiting its use recognized the principle that the amount used must be considered. This, the Supreme Court of the United States also did in its decision in the famous Bleached Flour case.

An excessive use of anything is harmful, whether it be sugar, salt or water.

SACCHARIN is much more desirable than sugar as a sweetening agent for soft drinks from any view point: (First)—Healthfulness; (Second)—Economy.

In using SACCHARIN the danger from the use of sugar is eliminated, and the infinitesimal amount of SACCHARIN that is required to sweeten cannot possibly be harmful to any one, either adults or children.

Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

Use SACCHARIN to sweeten and do not hesitate to declare its use on the label. **Such declaration stamps your goods as being healthful.**

MONSANTO CHEMICAL WORKS

Manufacturers of Saccharin

ST. LOUIS

Branch: Platt and Pearl Streets, New York



Food News from the East



NEW YORK, Feb. 29, 1916.—The City of New York has broken into the coffee trade with results not altogether unlike the famous experience of the bull in the china shop. It's a little too early to state exactly what the effect will prove to be, but thus far it has provoked a good deal of sensational smashing of traditions and everyone in the trade is talking about it.

Till something like a year ago, New York's various departments bought coffee—like every other city supply—to their own liking and in such amounts and grades as the several departments needed. Then the Mitchel administration concluded to establish a centralized buying department and when coffee, or anything else was bought, it was bought for the needs of all departments which used that article. The savings have been enormous and the service to all concerned has become so manifest that even politics will not upset the plan.

This year the Buying Committee concluded to buy its own coffee, and instead of buying all kinds and varieties—from roasters, jobbers or anyone who had a grade—to buy the berries green, set up a roasting plant on Blackwells island, where labor is cheap and plenty, and do its own roasting for all departments. Before doing so, Chief Inspector H. M. Foster browsed through the coffee trade seeking information as to trade practices, which would permit him to make a good and fair specification for the 350,000 pounds of coffee the city will need this year. He found that, while certain points of judgment were commonly used, they were not used alike and even the Coffee Exchange "rules" were elastic. In the end, he made a specification to his own liking, reduced it to a score-card basis and put out the proposals.

This score card was based on the system of "black beans" as is customary, but it went further and set up certain other defects which were also reduced to equivalents of "black beans," in much the following way:

Grade.	Defects.
No. 1.....	0
No. 2.....	6
No. 3.....	12
No. 4.....	30
No. 5.....	60
No. 6.....	120

The standard unit of defects shall be one black bean or its equivalent and the equivalents shall be as follows:

DEFINITION OF DEFECTS EQUAL TO ONE BLACK BEAN.

- 1 bean $\frac{1}{2}$ black.
- 2 beans less than $\frac{1}{2}$ black.
- 4 quakers.
- 4 immatured beans.
- 4 badly cured soft or sour beans.
- 2 scorched beans.
- 3 shells.
- 8 broken beans sound.
- 1 large stone equals 2 black beans.
- 1 large twig equals 2 black beans.
- 1 large husk.
- 1 medium sized stone.
- 1 medium sized twig.
- 2 small stones.
- 2 small twigs.
- 2 small husks.
- 1 pod.

The proposal called for 288,800 pounds of "Santos No. 3," to be divided 21,400 pounds to Bellevue Hospital and its allied institutions; 150,000 to the Department of Public Charities; 108,000 to the Department of Correction, and 9,400 to the Department of Health; also 22,600 pounds of Bogota and Colombian, of which 17,900 will go to Bellevue and 4,700 pounds to the Department of Health; also, 31,000 pounds of Bogota and Colombian, of which 20,000 pounds is for the

Department of Public Charities and 11,000 pounds to the Department of Correction.

It is understood that the 52,000 pounds of Bogota is to be used chiefly by doctors and nurses in hospitals and the 288,000 pounds of No. 3 Santos for general consumption.

It was also stipulated that the grading must be in accordance with the city's score system, but by official graders of the Coffee Exchange. And that's the "blow that almost killed father." Never before had anyone dared tell the sublime mystics of the Coffee Exchange just how they should and should not grade coffee; they did it in their own way. The suggestion of the city was distinctly "lese majeste" and the powers that be in the holy of holies held up their hands in holy horror. Officials of the Exchange notified the city that they would not stand for such presumption and it was whispered that any grader who dared do the city's bidding would be dismissed from the Exchange.

And there the whole matter hangs at present. The city will insist on a pound sample instead of a "pan" and will require its own grading specification. The city's grader says he is ready to follow the city's orders, even if he is fired from the Exchange. And the trade is dividing off into rival camps and wondering what will happen; ready to hop onto the Exchange officials if they undertake any drastic or arbitrary action to prevent a buyer doing as he blank pleases about coffee he is going to buy. The crucial moment is expected to arrive in a few days, when the samples are submitted on the bids.

NEW BUTTER AND EGG EXCHANGE.

The Mercantile Exchange is to have a rival. The papers are expected to be filed at Albany for its incorporation within a few days and rumor says that already 200 merchants in the trade have signed the contract to join as soon as the incorporation is effected; also to transact business on the floor of the new exchange, though there is no rule against non-intercourse, wherefore it is claimed that some members of the old exchange will also join the new.

The new butter and egg exchange—it will probably be known as the "American Butter and Egg Exchange," although it is not yet settled—held its first formal meeting last week and made a showing at the outset which surprised observers as to its strength. Instead of planning out a movement among "a few discontented Jews of the East Side," it proved to have the support of some of the oldest and most influential members of the Mercantile Exchange; at least two of the committee on organization being former presidents.

There were about 50 of the signers of the call present and several speeches made indicated not so much bitterness toward the old exchange as a sense of regret that the old body had been over-exclusive and had forced non-acceptable people of the trade to form a new body for self-protection. Some of the speeches were made by E. E. Martin, a former president of the Mercantile Exchange; F. G. Urner, also a former president, and H. D. Wheeler, who for many years led the egg committee. S. Blick appeared to be the leader in the movement, but as soon as he had opened the meeting, E. E. Martin was elected temporary president, with Louis Wisansky as secretary.

After much discussion, it was decided to name a committee of 24 to take charge of the organization enterprise, and \$10 each was paid in for a temporary fund. The committee named to perfect the organization comprised the following:

Edward E. Martin, Harry D. Wheeler, Adolph Fortgang, H. Atlan, B. W. Mouser, S. Blick, B. Albert, Max Kurtin, B. Tittman, Eugene Vanronk, S. Rottenberg, A. Mercel, Samuel S. Selber, Louis Wizansky, H. Wittner, H. E. Commin, L. O. Spindler, B. Gabriel, U. L. Maloney, J. O. Marshall, H. Suffin, Emory Haggin, Frank G. Urner and G. Jocnowitz.

In official circles of the Mercantile Exchange a movement has started to persuade the new body to "come under the

This Brand Marks A New Era In The Raisin Business



Sun-Maid Raisins

standardize product and prices in the raisin business, from grower to consumer.

6000 California raisin growers are achieving this result with this brand by an organized campaign of national educational advertising.

Raisins Now Sure

This makes raisins a safe buy always by steadying the market price and developing a new demand.

These associated growers virtually have put an end to the old speculative days, when you never knew, from week to week, how much you would have to pay for raisins.

Now you are sure of steady profits.

A National Demand

Our nation-wide advertising is booming the demand for this brand. Sun-Maid Raisins are the only brand nationally advertised. They represent the choice of 6000 vineyards—plump, meaty, luscious white muscatels, sun-cured in the vineyards, seeded, and packed in attractive cartons—36/16s to the case.

The retail price is 15c, 2 for 25c.

Let us tell you how we help you cash in on the prestige and reputation of Sun-Maid raisins. Write the office nearest you, today.

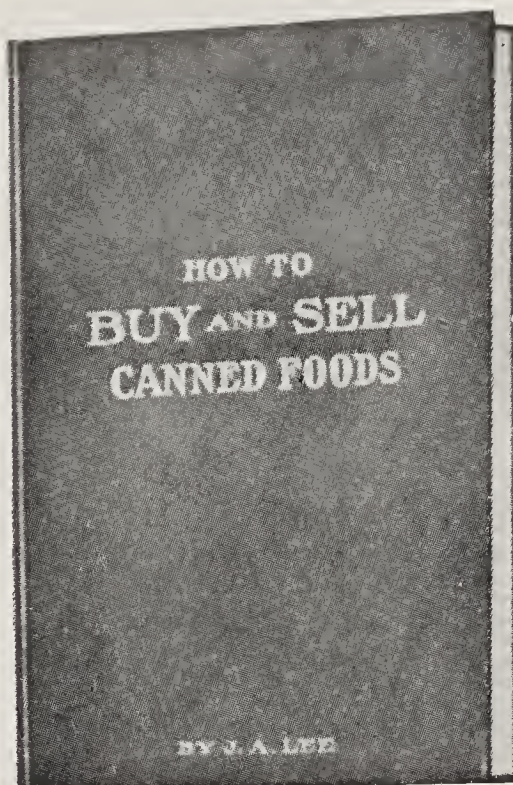
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Membership, 6000 Growers

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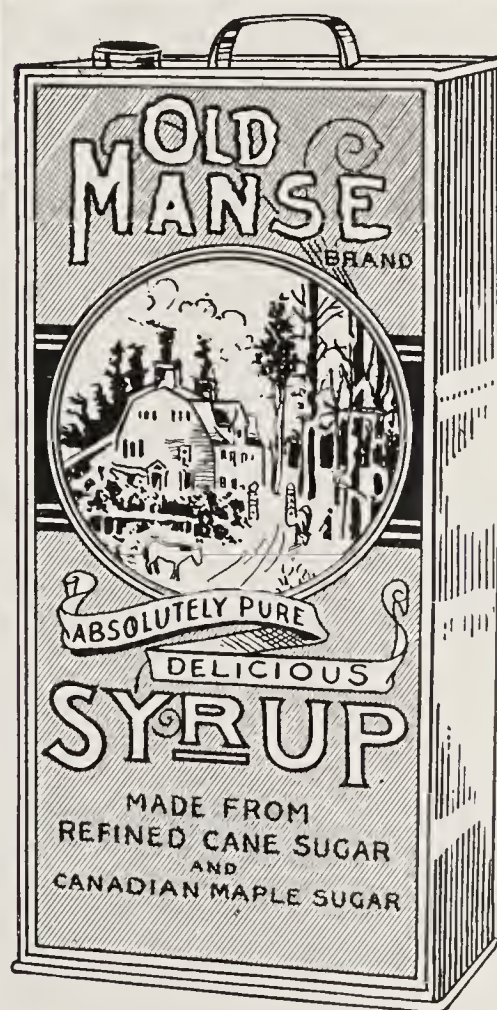
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Will continue to do so.

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CHICAGO, ILL., U. S. A.

umbrella" of the older organization, use its floor and rooms during certain agreed hours and unite in the gathering of correspondence, statistics, market reports, etc. These arguments are based on the unwisdom of duplicating the same service and of rents. But, according to some of the leaders in the new body, there will be no encouragement of any such "second fiddle" performance. On the other hand, however, it is known that Mr. Urner has been one of the most influential in making the suggestion of combining in the use of the Mercantile Exchange rooms, and it is thought that the end of that suggestion is not yet.

SUGAR REFINERS' TROUBLES.

Seaboard refiners of sugar thought they had troubles enough in competing with beet sugar manufacturers and the sugar interests of Louisiana; troubles which F. C. Lowrie has been trying to overcome by persuading Uncle Sam to remove the tariff on raws and substitute for revenue necessities a consumption tax on all sugars of whatever variety—but it begins to look as though the prevailing scarcity of freight at workable rates are even more serious as a handicap to their holding their own.

With England commandeering practically all of its own merchant ship facilities formerly plying in the sugar trade to the United States, the American-Hawaiian Line withdrawing eleven of its fleet of fourteen vessels from the Hawaiian route, and fewer ships becoming available among the French, Norwegian and other merchant marines, the factor of ocean transportation for sugar importations into this country has come to be an interesting feature in our local markets.

Freight rates on sugar cargoes from Cuba within the past month have reached the level of 50 to 55 cents per 100 pounds, compared with a normal rate of about 10 or 11 cents per 100 pounds.

Some of the refiners have endeavored to surmount the difficulties of providing ocean transportation by adopting shorter water routes from the Philippines, Cuba and the Hawaiian Islands to Gulf and Pacific ports of the United States, thence sending their consignments by rail overland.

So far as can be learned the refiners who adopted the experimental Cuba-Key West water and rail route for their shipments to Philadelphia, found that the cost of transportation by such means, with the all-water rate from Cuba to Philadelphia at current high levels, was not very much more.

Meanwhile, Mr. Lowrie has been analyzing the beet sugar companies and trying to show that they are getting rich altogether too fast and to use that fact as a further support of his contention that they should be taxed as makers of sugar just as the users of imported raws are taxed through the tariff.

"Two years ago," said Lowrie, "when prices were low, the party in power determined that, even under normal conditions, these sugar companies on May 1, 1916, would have to give up their tariff subsidy. Now when prices are so high, that even without the tariff benefit of a little over 1c per pound, these companies would be exceedingly prosperous, it is proposed to continue the subsidy. The principle followed seems to be that 'to those who bath shall be given.'"

Following is a comparative table of beet sugar company stocks, prepared by Mr. Lowry:

	March 1, 1914.	Feb., 1916.
Amer. Beet Sugar Co. pfd.....	\$65.00	\$ 95.00
do common	20.00	68.00
Great Western Sugar Co. pfd.....	91.00	112.00
do common	45.00	140.00
Michigan Sugar Co. pfd.....	85.00	100.00
do common	35.00	102.00
Utah-Idaho Sugar Co. (par \$10), pfd.....	6.50	12.50

"These companies," declares Mr. Lowrie, "produce about 70 per cent of our total beet sugar production.

"The combined total advances in the value of the stocks of these companies amounts to \$35,630,987, and of this \$24,555,537 represents the advance in the value of the common stock, which is universally regarded as 'all water.'

"The profits of these typical domestic beet sugar companies,

because of the European war, and the scarcity of supplies, compare favorably with those engaged in the manufacture of munitions of war.

"They differ in this respect: The manufacturers of munitions exact their profits from foreign governments, while the beet sugar companies who produce sugar at a cost of 3c per pound and sell at 6c per pound exact their profits from the American consumers, as none of their sugar is exported."

STEVENS BILL A BONE OF CONTENTION.

The fight over the Stevens bill and the whole principle of manufacturer control of resale prices—or broader yet, of competition—is waxing especially hot of late and it is hard to predict where it will all end. Scarcely a meeting or dinner of trade associations is held without this issue coming to the front as a topic for discussion. Several bills, proposing substantially the same thing as the Stevens bill, though with modifications, are before Congress and in all fields of mercantile interest hereabouts the fight is growing bitter and warm.

Because one faction of the National Retail Dry Goods Association tried to use its influence as an association to kill the bill, and to claim that all dry goods merchants are opposed to it, whereas many were not, the organization has split wide open and Secretary-Treasurer Pinkham, who has been its guiding spirit from the start, has resigned, while the two factions frankly admit their disagreement and write and talk about it by the column.

But the most interesting phase of the battle is the formation of the "National Trade Association," in which the price cutting department store men and the trading stamp companies have joined forces to fight the retail merchants who favor the Stevens bill and any other form of manufacturer control of branded merchandise. The officers of the association are George B. Caldwell, of Sperry & Hutchinson, president; Percy S. Straus, of R. H. Macy & Co., vice-president; Harry B. Haines, News Printing Company, treasurer; Edmond E. Wise, general counsel. The offices of the association are at 18 East 41st street.

Although the combination has caused much surprise in certain circles, there need be really very little astonishment that the trading stamp and price cutting factions should combine, for they are really fighting the same thing—the manufacturer's domination of his goods after he sells them. The price cutter wants to set his own price, as a means of controlling the competition of his merchandise. When a manufacturer undertakes to assume the competition, either by price fixing or by packing coupons inside, the price cutter's independence is challenged. He wants to fix his own prices and use trading stamps in place of coupons. And that's where the community of interest between the price cutter and the Trading Stamp concern comes in; both antagonistic to the organized retailers of the country.

President George B. Caldwell declares that while one of the purposes of the organization is to fight the Stevens bill, it intends to cover a much broader field and oppose any vicious legislation against the best interests of trade. The preamble to the constitution sets forth the objects of the association as follows:

"To promote the impartial and scientific study of business conditions in all sections of the country and present the result to the members and to the public; to investigate means of securing better markets for producers, diminishing the expense of distribution and reducing the cost to consumers; to encourage scientific and uniform legislation intended to foster trade and commerce, and to oppose and arouse public sentiment against legislation which seeks to shackle trade and commerce or to hinder the free play of competition in the supply or price of commodities in the interests of the few and to the injury of the many; to create a national league of practical men engaged in trade and commerce, whose efforts shall be directed through a non-political constructive association to establish a clear understanding of the commercial needs of the whole country and of its various sections and of governmental regulation thereof, or interference therewith."

TIN and FIBRE CONTAINERS

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Foods, Drugs, Oils

Infinite Variety
Large Capacities
Prompt Deliveries

American Can Company

Chicago New York San Francisco

WITH OFFICES IN ALL LARGE CITIES

RUMFORD

The Wholesome

Baking Powder

A scientific preparation being the result of extended research by the celebrated chemist Prof. E. N. Horsford, for many years Prof. of Chemistry in Harvard University.

Dietetically speaking, Rumford is without fault; as a leavening agent it is perfect; as a keeper it has no superior.

DOES NOT CONTAIN ALUM

Its Purity is Unsurpassed.

BUY PURE COMPRESSED YEAST

The discussion about using starch in Compressed Yeast has reached the point in the United States of a decision forcing those who used it to declare the fact on the wrapper or label.

That is how we administer the Food Laws in this country.

In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

We Do Not Use Starch in Yeast

A. P. CALLAHAN & COMPANY

2407 La Salle Street

Telephone Calumet 410

CHICAGO, ILLINOIS

The directors of the National Trade Association are the following:

Howard Brokaw, Brokaw Bros., New York; John H. Love, Graupner, Love & Lamprecht, New York; Edmond E. Wise, New York; A. J. Marcus, West Disinfecting Company, New York; Jason Rogers, the "Globe," New York; George W. Mitton, Jordan, Marsh Company, Boston; John C. McKeon, Laird, Schober & Co., Philadelphia; A. M. McCallum, McCallum Hosiery Company, Northampton, Mass.; Louis C. Page, the Page Company, Boston; John H. Snowden, Stead & Miller, Philadelphia; George W. McGeachin, Witcombe, McGeachin & Co., New York; G. Hawlett Davis, Standard Music Roll Company, Orange, N. J.; A. Meier, Meier & Frank, Portland, Ore.

NEW CURE FOR PRICE CUTTING.

Murder is a pretty certain cure for price cutting, but the gang of chicken dealers who instigated and pulled off the murder of Barnet Baff, a rich poultry dealer of this city, some 14 or 15 months ago, are finding that it has its penalties. In fact a number of crooked chicken operators are beginning to loom large as promising candidates for the electric chair. And because it is clearly a business episode, I feel justified in writing about it here.

Baff, it appears, was a notorious price cutter and got rich at it. He was hated everywhere in the trade but grew rapidly richer and richer and more and more a hopeless rival of others in the trade. When he was shot down in the dusk of a November afternoon, almost in front of his office, by men who called him out for the purpose and then disappeared in an automobile, it was generally attributed to the work of his rival chicken dealers or their hirelings, but it was impossible to connect anything tangible.

Recently a very remote clew furnished the connecting link to a lot of equally remote incidents, which, in the hands of the police, wove a story which led to the arrest of one Frank Ferrara, who, it was charged, drove the murder car and got \$200 for doing so. Through the intervention of Evert Jansen Wendell, a well known philanthropist who once befriended Ferrara, he was induced to confess fully and started the downfall of the gang. Already four gunmen are in hand—Giuseppe Arachiello, who confesses to having given the signal that caused the identification and the shot; Carmiello Russo, who is already in a reformatory for highway robbery, and Joseph and Tony Zafarones, who are said to have fired shots. One Greco, a saloonkeeper, supposed to have handled the murder fund that paid the gunmen, has since been murdered, possibly because he knew too much for comfort of the gang.

The police have a great deal of evidence that is being sifted to get at the truth but it tends to prove that something like 200 of Baff's unfortunate competitors contributed to a fund which reached the sum of \$4,200 and was used to pay for the murder. Ever since this came out, District Attorney Swann has had a stream of chicken dealers besieging his office in an effort to explain how they came to contribute to the murder fund without knowing the real use of the fund, but the police suspect that a "steering committee" of 12 Kosher "chicken pullers" did know all about it and have a strong prospect of going to the chair, while the police declare that they are sure of sending four of the actual gunmen there and have thus far refused to accept them as state's witnesses at the price of immunity. One ironic feature of the case appears to be the fact that Baff himself contributed \$200 to the fund without knowledge of what was to be done with it, save to use it for "the good of the trade."

In their investigation of the murder, the police have been hunting for the "men higher up" only to discover that the man they charge with being the instigator of the murder is at present a corporal in the Italian army, fighting in the Trentino, and efforts will be made to have him brought back to civil jurisdiction and extradited. He is said to be a partner of the Jew who collected the murder fund and to have fled the country when he found the trail getting too warm.

BIG DRUG COMBINATIONS.

Drug mergers are in the air. Not only are the prospects of the reorganization of the big United Drug Company, with capital exceeding \$34,000,000, beginning to leak out, but from up-state comes a report of the formation there of a three-branch combine with capital of \$1,000,000.

Within a few days the initial meeting of the United, to combine the Liggett and Riker-Hegeman concerns will be called and Wall street is already fairly well informed as to the probable personnel of its management. According to the present program, Louis K. Liggett will be president and James C. McCormick treasurer. Persons understood to be familiar with the proposed plans state that in the organization of the new \$34,245,350 United Drug Company the following Riker-Hegeman interests will be added to the directorate of the new corporation:

John B. Cobb, William C. Bolton, E. D. Calhoun and J. H. Flagler. The statement is also made that John S. Alley, president of the Riker-Hegeman Company, will become vice president of the Liggett Company, and George M. Gales, now vice-president of the Liggett Company, will become president of that company, succeeding Louis K. Liggett, who will be chairman of the board of directors.

R. B. Wattley, treasurer of the Riker-Hegeman Company, will be treasurer of the Liggett Company, and W. C. Watt, the present treasurer, will become vice-president.

The initial authorized capital is \$7,500,000 7 per cent cumulative first preferred, \$10,000,000 6 per cent non-cumulative second preferred and \$35,000,000 common.

According to Syracuse advices, the up-state merger is to be composed of the Gibson Drug Company of Rochester, C. W. Snow & Co. of Syracuse and Walker & Gibson of Albany. The new concern will probably be capitalized at \$1,000,000, although the amount of money involved is now pending.

The combined annual business of the three companies mentioned is estimated at more than \$4,000,000. The main office of the new company will, no doubt, be in Albany. The Walker & Gobson Co. is located in that city and is the largest of the three concerns to be affected.

THREE BIG MEN RESIGN.

The past month has seen three very interesting and important resignations in the grocery and specialty field of this market—Lewis E. Pierson, retiring as president of Austin, Nichols & Co., the biggest wholesale house in the country; George W. Hopkins resigning as vice-president and general manager of the great Loose-Wiles Biscuit Co., and S. W. Eckman resigning as sales and advertising manager of B. T. Babbitt, Inc., the old-established soap manufacturers.

It will be recalled that about the time Austin, Nichols & Co. started their career of expansion and removed from Hudson street to the mammoth establishment in Greenpoint, Brooklyn, Mr. Pierson was coaxed from the presidency of the Irving bank to head the new firm and was loudly heralded as the only \$50,000 salaried man in the grocery trade. Mr. Pierson was doubtless a tower of financial strength to the concern at a time when it needed strong friends in banking circles and he has been generally looked upon as the main stability of the big grocery house. To have him withdraw was therefore startling.

In reply to questions of the writer, however, Mr. Pierson declares that there is no special significance in the move. He says the concern needed help at the time he joined it and the work of organization has been a large task. However, he feels that it has now been well accomplished and things are running so well that he feels free to listen to the urgings of his friends in the bank—which has also grown amazingly, and return to its office.

Mr. Hopkins is generally credited with being one of the liveliest specialty men in the country, with a train of notable successes to his credit. He has long occupied a position of prominence in the trade, being for several years with Chase & Sanborn of Boston, and later, for some time, manager of the Johnson Educator Food Co. of the same city, during which time he brought that company into a peculiarly strong place in grocery circles. His success there led to his selec-

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GOOD LUCK
MARGARINE**

is eaten with satisfaction at every meal. Always the same fine flavor—the same delicioustaste, the relish and enjoyment there is to a pure, wholesome appetizing food.



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**Illinois Vinegar
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19th and Rockwell Streets
CHICAGO, ILL.

**MANUFACTURERS OF HIGH GRADE
DISTILLED VINEGAR**

Canned Salmon

ALL GRADES ALL SIZES

Largest Distributors
in the World

KELLEY-CLARKE CO.
NEW YORK CITY SEATTLE, WASH.

SPIELMANN BROS. CO.

MANUFACTURERS OF

**CIDERS, VINEGARS &
COMPRESSED YEAST**

MAIN OFFICE

Sheffield and North Aves.
CHICAGO, ILL.

"GOOD-BYE FLY"

According to Department of Agriculture Bulletin No. 118: Apply 0.62 pounds Borax to every 10 cubic feet of manure. Apply Borax particularly around edges; sprinkle with 2 or 3 gallons of water. This treatment should be repeated with each addition of fresh manure. Flies lay their eggs in fresh manure. Borax prevents their hatching.

Don't use more Borax than recommended above.

B. HELLER & CO.

THE PLANT BEHIND OUR PRODUCTS



CHICAGO, U.S.A.

tion by the Loose-Wiles Co. to take charge of its sales department, when it entered on a policy of expansion two or three years ago, and the rapid advance of Sunshine goods in competition with large competitors, especially in metropolitan fields has generally been credited to Mr. Hopkins' influence.

Mr. Hopkins actually resigned last December, owing, it is said, to differences of opinion with Mr. Loose as to certain policies. Neither side to the controversy will discuss the matter, but it is understood that Mr. Hopkins' decision came to most of his official associates as a bolt from a clear sky, though Mr. Loose and Mr. Hopkins have understood the matter to be impending for some time past. No successor has been named for general sales manager and Mr. Hopkins has not yet announced his plans, though he is said to be considering several flattering offers.

Mr. Eckman has long been an active factor in the specialty trade and occupied several posts of marked importance in the American Specialty Manufacturers' Association and in advertising circles. He is an Indianapolis boy, came to New York, studied law, went to Porto Rico during the Spanish war, taught school after it, came back to New York, obtained his admission to the bar, then went into export trade and through his knowledge of Spanish-American conditions became export manager and then sales manager of Babbitt. He expects to start an export venture on his own account, with several well known American lines. But the specialty ranks will miss him.

BLUNDERING LAW MAKERS.

In their efforts to control a lot of second-hand sharks and junk peddlers, the city fathers have mortally offended the jewelers and booksellers of this city by classing them along with cheap dealers in refuse materials as "second-hand dealers" under an ordinance which has recently become effective and which establishes a number of onerous conditions.

The booksellers held a hearing recently before Secretary Van Wert of the Police Commissioner's office, in an effort to have the ordinance so amended as to leave them out of the undesirable company of junk men. Charles E. Butler, of Brentano's, outlined the case as follows:

"The purchase of a single book does not often occur, such purchase being mostly in quantities of tens to hundreds, and very often whole libraries of thousands of books. In all such assortments the average of desirable books for the bookseller is small, the great majority being worth only so much waste paper which he disposes of as such. This situation is brought about by the demand of the citizen disposing of his books, that the whole lot goes; he wants the room and must get rid of them. Heretofore, this was easy to handle by the bookseller and caused but little trouble save in the assorting.

"Suddenly, all this is changed. Citizen and bookseller are warned that hereafter the former cannot sell his books or the bookseller buy, except in broad daylight—no such transaction again under the cover of darkness for the law confines all such purchasing operations of the bookseller to the hours between 'sunrise and sunset.'

"The bookseller is warned, under threats of punishment, that hereafter he must provide himself with a blank book, suitably ruled, suitably paged, in which he must duly enter every book or magazine that he may have purchased any given day, any given year, between the hours of sunrise and sunset.

"Had the Police Department, the Board of Aldermen or any other class of gentlemen been the most bitter enemies of the booksellers and desired to inflict upon them the most drastic punishment, it is doubtful if anything better could have been devised for the purpose than this part of the law. The writing in the blank book of the title of the books is bad enough, but now it must be described—the binding, the color, the pattern. Search must be made through it for any mark that would identify it, certain dogears, certain parts of the binding damaged, only half a cover on one, any monograms, crests, book plates or inscriptions.

"It is certainly against public policy to put booksellers in

the pawnbroker and junk dealer class or surround them with such restrictions that will hamper and prevent their being booksellers."

A similar blunder has apparently been made in drawing the proposed Federal cold storage bill, now before Congress; the result being that in prohibiting cold storage of fish beyond a stated period, no distinction has been made between fresh fish and such preserved fish as smoked, pickled, salted and frozen fish.

The Norwegian Chamber of Commerce is vitally interested in the issue and will seek to prevail on Congress that it should be radically amended because even salt fish are sometimes kept in storage for extra safety and the law would be unnecessary and onerous.

TAKING "PAY-UP" WEEK SERIOUSLY.

News from Pennsylvania indicates that the Burgess of Wilmerding, Pa. (corresponding to the more familiar mayor), has taken the idea of "Pay-up Week" seriously enough to make it a municipal official proclamation, designating this week for the clearing of debts. In part, his proclamation, preceded by a variety of "whereases" and "therefores," reads as follows:

"Therefore I, by virtue of authority vested in me as Burgess of Wilmerding, Pa., do hereby designate and proclaim the week of Feb. 21 to 26 inclusive as pay-up week in this community and I do sincerely trust that every man and every woman in our city or community who owes a debt will endeavor to pay it this week and thus aid in the great national movement for prosperity."

COFFEE SHIPS SCARCE.

A good deal of excitement has been caused in coffee circles this week over the prospect that Great Britain, acting under the latest orders in council, may commandeer all British ships for trade between ports of the United Kingdom, especially those now running between Brazil and this country. In case such withdrawal takes place, it will do much to curtail the coffee receipts and on the strength of the report, coffee prices have been rather strengthened.

The State and Commerce departments at Washington, however, got very busy in the matter and urged the Brazilian government to consider securing other cargo carriers in case this withdrawal happened. In reply came a consular letter from Consul Gottschalk of Rio that the Brazilian government had ordered the Brazilian steamers Mossoro and Guahyba to take 80,000 bags of coffee for the United States and the Acre, which sailed January 27 to take 30,000. During February and March the following coffee cargoes will leave for New York: The Weinberg, 100,000 bags; the Purus, 90,000; the Tocantins, 98,000, and the Rio de Janeiro, 18,000 bags.

The report added that the Brazilian government expected as a result of the increased tonnage to the United States that facilities for the movement of the return cargoes of American goods would be increased.

The announcement that the Brazilian government would take steps to break the shipping famine in that quarter had a demoralizing effect on the coffee future market, which on heavy selling declined $\frac{1}{4}$ c.

ALLIES FORM BUYING POOL.

The European Allies have entered into a "conspiracy" in restraint of competition—or at least something that looks like it in essentials. In their purchases of grain they have discovered that they have been bidding up on one another and by raising the price paid, wherefore they have formed—at least the British, French and Italian governments are in it—a consolidated buying office in this city and opened headquarters in the Produce Exchange building.

H. T. Robson and H. D. Burbridge, of the firm of Ross T. Smythe & Co. of London and Liverpool, have arrived in New York to get the new system started, and will be regularly rep-



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Plans are already laid to place Waw Waw in its deserved position as the King of Table Sauces.

We cannot make Waw Waw Sauce itself any better but we can and will make Waw Waw Sauce a better seller.

An extensive advertising campaign in the leading Journals is now in course of preparation. No pains, expense or effort will be spared to make Waw Waw a leader in easy, steady selling, just as it is now a leader in quality.

Full details of the new plans will be mailed to jobbers and retailers throughout the country. In the meantime the already increasing inflows of orders are being filled promptly from our New York warehouse.

SPECIAL—If you are not fully acquainted with the unusual merit of Waw Waw Sauce, write at once and a full size sample bottle will be sent for trial on your own table.

St. James Importing Company NEW YORK

resented here by G. Rae Callender, a member of the Produce Exchange.

Financial details are expected to be taken care of through the London office, and ships are to be provided through government control. It is understood so far that the purchases by this committee will be of wheat and corn, but there is some doubt as to whether or not they will attempt to handle flour, or whether other arrangements will be made for that purpose.

Some time ago it was very generally understood that the buying of wheat for the Allies would be done through the Morgan house in co-operation with Armour & Co. It is believed that a great deal of business was done in this way, but with high ocean freights and the necessity for obtaining the Argentine wheat, some more comprehensive scheme had to be devised.

AMERICAN SPECIALTY DELEGATES.

The following have been appointed by President Lautz of the American Specialty Manufacturers' Association as the delegation to represent that association at meetings of the United States Chamber of Commerce:

A. J. Porter, chairman, president Shredded Wheat Company, Niagara Falls; A. M. Alexander, vice-president Foulds Milling Company, Chicago; William L. Sweet, treasurer Rumford Chemical Works, Providence, R. I.; Walter H. Lipe, vice-president Beech-Nut Packing Company, Canajoharie, N. Y.; W. M. McCormick, president McCormick & Co., Baltimore; Charles W. Dunn, attorney for the association, New York City.

SPECIALTY MEN ELECT.

At the annual meeting of the New England Association of Manufacturers' Representatives recently the following officers were elected for 1916: President, J. F. O'Brien, of the Kellogg Toasted Corn Flake Company; vice-president, G. B. Wendall; secretary-treasurer, C. L. Raynor; executive committee, W. F. Mattson (chairman), F. W. Tucker, G. H. Carter, G. E. Ficken and R. J. McCormick.

The association enters on the new year with a membership of thirty-two—all New England sales managers of large food manufacturers. It is expected that the association will do its share in entertaining the wholesale grocers at the June convention.

FISH SEASON YIELDS \$500,000.

Secretary of Commerce Redfield announced recently that the fishing fleet landing fish at Boston and Gloucester, Mass., and Portland, Me., included 296 steam and sail vessels. At Boston 388 trips were landed, aggregating 10,228,293 pounds of fish, valued at \$291,225; at Gloucester 181 trips were landed, aggregating 8,542,380 pounds, valued at \$199,502; and at Portland, 91 trips were landed, amounting to 683,668 pounds, valued at \$26,095; a total for the three ports of 660 trips, and 19,454,341 pounds of fresh and salted fish, for which the fishermen received \$516,822.

On September 1, large quantities of small mackerel were landed at Boston and on September 8 the schooner Tattler arrived at Gloucester with 475,000 pounds of salted cod. This is the largest hand-line fare landed at this port since 1909, when the same craft weighed off 479,433 pounds of cod. Swordfish have been quite plentiful. The catch of mackerel this year to September 20 amounts to 58,161 barrels of fresh and 8,240 barrels of salted, as compared with 65,900 barrels of fresh and 13,015 barrels of salted for the same period in 1914.

The West India Biscuit Co. (Ltd.) of Trinidad, capitalized at \$75,000, is erecting a biscuit factory in Port of Spain. The material used in the construction of the plant is largely American, and the machinery of American manufacture. The biscuits to be manufactured will be of the hard-tack variety, so much in demand in this section among large portions of the population, and the kind better adapted to withstand the humidity of the climate. The industry is financed by local capital.

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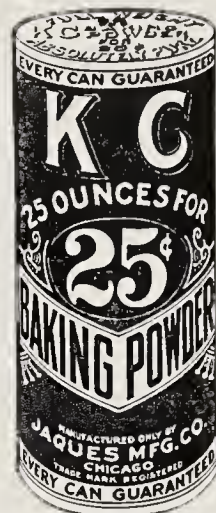
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LIMITED MARKET FOR YEAST CAKES.

Several American housewives living in Central America mentioned the difficulty of getting good yeast for baking purposes and expressed the opinion that if yeast cakes were put up in air-tight tins and prepared to keep a considerable length of time there should be a fairly good demand for them. Undoubtedly there would be a market of some extent among the Americans, English, French and Germans resident there, but it is doubtful if this element is sufficiently numerous to make the venture a paying one. In few of the native houses is yeast-risen bread baked. The crusty rolls to go with the early morning coffee and fruit usually come from the panaderia (bakery). Luncheon is, as a rule, served with the tasty corn tortillas, and this latter form of bread is preferred by most natives for the evening meal also. Yeast is not used in its preparation.

* * *

ENORMOUS CROPS OF LEMONS.

Twenty thousand acres in young lemon trees in California will soon come into bearing and double the domestic supply. The crop for the year ended August 31, 1915, was 6,667 cars, or 132 per cent more than last year. These large increases in production will call for a serious study in marketing the lemon crop of the United States.

The California Fruit Growers' Exchange lemon shippers have organized a company to manufacture by-products from the lower grades of fruit. The plant is under construction and the business will be handled on a co-operative basis, the growers receiving the full returns for the by-products after the cost of operation is deducted. From one and one-quarter to one and one-half million dollars' worth of lemon oil, citrate of lime, and other lemon by-products are imported annually into the United States. These products can be manufactured successfully in California from the lower grades of fruit that are not worth shipping, as well as from fruit that demoralizes the markets because of its inferior quality.

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That idea was adopted, and this superfine grade was named Quaker Oats.

Today it has millions of users, scattered all the world over. Oat lovers of a hundred nations send to us to get it.

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A bushel of choice oats yields but ten pounds of grains that are fit for Quaker. All others are discarded in this brand.

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THE AMERICAN FOOD JOURNAL



VOLUME ELEVEN
NUMBER FOUR

Chicago, April, 1916

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Cocoanut Industry of Borneo.



A monthly magazine devoted to the
interests of food control of-
ficials, food manufacturers
and wholesale grocers.



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THE AMERICAN FOOD JOURNAL

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Vol. XI.

APRIL, 1916.

Number 4.

Farrell Evades Vital Issues with Piffle

WE ARE in receipt of another valued contribution from J. J. Farrell, president of the National Creamery Butter Makers' Association—and, when not engaged with the onerous duties of this trying and exacting job, Dairy and Food Commissioner of the State of Minnesota. The Butter President has evidently harkened to the call of approaching Spring. Inspired with the muse of the sweet little butter-cup, he of mighty pen and piercing wit fairly revels in the promised perfumes of his native pastures and with all the delicious abandon of a school-girl poet indites his latest prodigy "A Gentle Zephyr."

What a treat it would be to the eyes and soul to see this latter-day Pan, flitting among the hills and dales of his beloved Minnesota, piping his lay upon the syrinx, a wreath of dandelion on his poetic brow!

Far be it from us who are again favored with the beautiful sentiments of this master mind, of this uncompromising, deep-delving judge of sorry facts and sordid motives, to draw our trembling quill across the least iota of this encyclical from the Grand Master of the Antique and Unaccepted Order of Explosive Cream.

With exquisite delicacy of feeling, the Butter President declines the titular handle of "Professor." Of a delightfully unassuming and retiring nature, he asks us to forbear from calling him by a title which he is most eminently fitted to lug along with his butter. Ah, well, so let it be. We must ever accede to the desires of the righteous.

But, it strikes us that we are withholding too long the treat in store for our readers. This is not as it should be; for course should follow course without too much interval. So, bring on the "Gentle Zephyr" of the good Butter President. Here, truly, is a feast of wit. Here is "a fellow of infinite jest," the Merrie Andrew, par excellence, of the roaring butter farce:

A GENTLE ZEPHYR.

Composed by J. J. Farrell, President, National Creamery Buttermakers' Association, and also Dairy and Food Commissioner of Minnesota. Rights reserved to all excepting Paul Pierce.

("These words are Farrell's, line for line;

For God's sake, reader, take them not for mine!")

The March issue of the AMERICAN FOOD JOURNAL, under the caption, "Prof. Farrell and the Dairy Storm," misstates numerous facts which, while unimportant (owing to their origin), and granting a liberal allowance for editorial license, I yet think should be corrected.

I am not a professor, in the light the AMERICAN FOOD JOURNAL seeks to convey, and have no desire to travel under false colors. Any communication I may send you will be properly signed, as was the article which appeared in the March issue. This will answer one of your numerous frivolous inquiries in said issue, and at the same time relieve you of the trouble of conjuring up a worthless prefix.

You inquire: "Do you pretend to believe that the Legislature meant to wink at fraud when the definition quoted by you was written into the statute?" Permit me to again set you right. What I did say was: "The Act of Congress, May 9, 1902, defines butter to mean 'The food product usually known as butter, and which is made exclusively from milk or cream, or both, with or without common salt, and with or without coloring matter.'" I said nothing about the Legislature; therefore your inquiry should read: "Do you pretend to believe that Congress meant to wink at fraud when the definition as quoted by you was written into the act?"

This matter was persented to you plainly, notwithstanding which you distort and evade, in this as in many other instances, when it suits your purpose. Your question, "Do you pretend to believe?" is meaningless. I am unable to see how one may believe and pretend on the same subject. Answering the above revised inquiry squarely, I believe the Act of Congress of May 9, 1902, defines butter to mean just what it has meant for hundreds of years, just what it means today, and just what it will continue to mean until Congress amends the law or enacts a new definition. It may be well, before you charge the Senate and House of Representatives

with winking at fraud, to examine your own minds; you may possibly find that both deception and fraud have an abiding place therein.

I am not going to undertake the herculean task of making straight your hundreds of ambiguous, distorting and misleading questions. You assume the character of a pettifogging attorney in a police court and demand that I answer a few simple questions as a service to the country at large, and you then go on with column after column of verbiage, the most of which is absolutely without value to anyone. There are no indications that you have any desire to serve the country, aside from that portion referred to as the special interests, whose cause, for reasons best known to yourselves, you champion. I will answer such questions as appear pertinent to the subject and are in the interests of the public.

You inquire: "Is the Bureau of Animal Industry mistaken in their various reports as to much butter being unwholesome, impure and a good conductor of disease germs?" Also, what is my impression of the resolution presented by Congressman Linthicum in the House of Representatives February 18, 1916? Both inquiries refer to the same subject and will be joined in the answer.

Assuming that you refer to the report of the Bureau of Animal Industry in 1912, on which the resolution referred to is based, my impression is that, if the Bureau of Animal Industry desired to be fair to the dairy and creamery industries of the country, they should have accompanied their report with their basic or ideal standard of sanitation and also with a definition of their conception of the term, "To a greater or less degree." In that event, the Bureau of Animal Industry might have escaped the charge of making a veiled attack upon the industry which pays the salaries of the officials of said Bureau "to a greater or less degree." If they desire to be fair, they should be specific. If certain creameries and their product are insanitary and infected with tuberculosis, typhoid fever and other infectious diseases "to a greater or less degree," they should give the names and locations of said creameries and indicate which is the greater offender and which the lesser in degree, that the consuming public may avoid the danger to health by contamination or infection "to a greater or less degree." The Bureau of Animal Industry, had they desired to be fair, could with equal propriety have said that every food product handled by man is insanitary "to a greater or less degree." My impression is that the desk on which the report was written, as well as the officials who are responsible for it, were insanitary "to a greater or less degree." Also, when the officials of said Bureau become so expert as to be able to compute within one-half of one per cent the cream that is insanitary at a given time in the United States of America, they are obviously mathematicians "to a greater or less degree." One wonders why the gentleman from Maryland, or other disinterested persons, should wait for approximately four years, during which time the public was exposed to the danger referred to in his resolution, and why at this time he is sending out letters soliciting resolutions from the constituents of congressmen and senators throughout the country in support of his measure. The methods adopted by the gentleman from Maryland warrant the conclusion that it is in part a carefully laid plan of the oleomargarine interests (whose actions were outlined by the AMERICAN FOOD JOURNAL in issues heretofore referred to) in retaliation for some imagined wrong done by the National Dairy Union. It is my impression that, if Congressman Linthicum desires to corroborate the charges embodied in his so momentous resolution, he should summon before the committee the AMERICAN FOOD JOURNAL, the cottonseed oil crushers, the oleomargarine interests, and Paul Pierce, long-distance pure food editor, all of whom say they are truthful and without prejudice. It will be unnecessary to prove these facts; they all admit the truth of them. In illustration: The AMERICAN FOOD JOURNAL, as evidence of their unbiased attitude, states: "There is another reason, however, for the existence of the National Dairy Union, and that is to attack, by gradual and well-timed blows, oleomargarine, the great competitor of butter, with the hope of ultimately eliminating it from the field. The last objective is not mentioned, of

course, in the by-laws of the organization." Could anything be fairer than that? Perish the thought! None of the above is mentioned in the by-laws, or otherwise, of the National Dairy Union, but the AMERICAN FOOD JOURNAL in all fairness supplies the deficiency and states that it is one of its objects, and that settles it. Yes, oleomargarine is a competitor of butter (in a fraudulent way), so much so that the Columbus Dairy Company, as disclosed by the evidence, has sold millions of pounds of it in one-pound cartons as and for butter and was, through such fraud, the beneficiary to the extent of nine millions of dollars in fifteen years. "Of course" the National Dairy Union should not object to a little thing like that, and of course there are a great many other millions of pounds of oleomargarine sold in the same way throughout the country; but what of that! It was only a little harmless way of relieving the consumer of his surplus cash and, at the same time, playing a practical joke on him. Quite practical. Ha, ha! As further evidence of an open mind, the AMERICAN FOOD JOURNAL in the same issue states: "The clans are assembling for concerted action. Chief among these is the Cottonseed Crushers' Association, which at the present time enjoys a particularly strong backing in Congress." It is a fair conclusion that the AMERICAN FOOD JOURNAL has access to the inner circle of the clans and therefore knows what it is talking about.

In the March issue they say: "Our editorials have been fair, we believe, from the very start. We have not taken up the cause of oleomargarine, nor have we more than even mentioned the names in any of these editorials." Maybe so! Maybe so! According to your statement, that is at best merely a matter of belief, and we dislike to disturb anyone's belief. But, outside of the clans, we find no one of a similar belief. Should I discover any evidence of fairness, in the light of what is before me, I shall require some proof that will differ materially from that presented by the AMERICAN FOOD JOURNAL.

As further evidence of their fair-minded attitude, they state in the March issue: "The fact that today butter is manufactured under shameful and outrageous conditions, the fact that some of our highly respected butter manufacturers are fattening their hides on the proceeds of fraud, misrepresentation and tactics worthy of a porch climber, and that disease germs are packed by the million into a tub of butter, and the fact that such butter is not food but poison, can be denied by you but never disproved or refuted." The above so-called facts are not facts in any sense of the word; they are merely the nightmare of a muck raker who forgets that the burden of proof is upon him to support his allegations, but when called upon to do so presents big heap talk and more talk. A porch climber is an angel compared with the saintly muck raker who attempts to state facts. For further evidence, see the AMERICAN FOOD JOURNAL for the past five months.

The Cottonseed Oil Crushers and the oleomargarine interests are so closely allied that their attitude toward the dairy and creamery industries, like your own, is easily established; also accepted at its full value. Like yourselves, they say little about the merits of oleomargarine, save by an active campaign in disparagement of butter. In illustration: One prominent manufacturer makes the following statements: "* * * Oleomargarine is made essentially from the same ingredients as creamery butter, though by a mechanical process" * * * "far superior to ordinary butter." These statements are, of course, false and misleading, but a little thing like that doesn't matter—they have done so many worse things that they consider the above the hallmark of virtue. Oleomargarine made from essentially the same ingredients as butter contains cottonseed oil, lard, oleo oil, and a small percentage of butter. Further comment is unnecessary.

We now come to Paul Pierce, editor of the National Food Magazine, also long distance editor of the Minneapolis Tribune and other publications, who suddenly blossomed out as an advocate of oleomargarine under the misnomer of the "Poor Man's Butter." Paul's solicitude for the welfare of the poor man was really touching. Paul swung his gonfalon to the breeze, pulled his trusty snickersnee and went at the

dairy and creamery industries and had a perfectly glorious time. He told how oleomargarine was prepared, what the ingredients were, and apologized because it was necessary to use from 33½ to 50 per cent of butter in its manufacture. Aside from that, it was a delightful pure food. He assembled a lot of he angels and put them to work, in immaculate attire, turning out oleomargarine that in any scoring contest would be entitled to a score of 101½ out of a possible 100.

Then Paul referred to the paint that was used in butter. He took hold of the family purse, opened it and spent millions of dollars for painted butter. Yes'r, whenever he felt like it he kicked a million out of that old wallet without disfiguring it. Old Man Aladdin, with his wonderful lamp, looked like a plugged Mexican dime alongside of Paul's high-gear, self-acting wallet. He had us going! We were in a blue funk. In fact, it was the one time in our young lives when we were scared good. Then we came to. We immediately—mind you, immediately—remembered that Paul never had an original idea in his head. Some one had writ it for him, and maybe paid Paul to peddle it for pure food. So we grabbed our old stub pen and wrote a few kind words to the Minneapolis Tribune, merely objecting to the tenor of Paul's remarks and gently requesting the opportunity of refuting the enthusiastic conclusions of their pure food editor. We were afraid it would be declined with thanks, and for the recovery of our valuable manuscript, and upon the advice of our hired man, we enclosed a self-addressed stamped envelope for its return. Did they return it? They did not. Did they publish it, or acknowledge that they had received it? No's'r. We then went after our H. M. to recover the value of the stamp. He suggested that we again write the Tribune, asking for the return of the aforesaid MS., which was done, and we are still out the price of the stamp. Again we complained to our H. M., who said that the Minneapolis Tribune was not to blame, as they had undoubtedly sent it to Mr. Paul Pierce, poor food editor, New York. In fact, he says he knows it; he has been watching the pure food page of the Minneapolis Tribune and says that, since we sent the aforesaid kind remarks to that paper, Paul has not written a darned thing for it, except recipes of how to cook onions and conserve the smell. There are, of course, other recipes, which our H. M. says Paul takes from Jennie June's cook book; that Jennie is dead, and hence Paul feels safe.

There are others, doubtless, who know similar things against the dairy and creamery industries. The AMERICAN FOOD JOURNAL is in position to know the hammer wielders; get them before the committee. We are in favor of the most thorough investigation that can be made; it will be the best thing for the dairy and creamery industries that has occurred in twenty years. It won't cost them a cent, and they can demonstrate to the American people the true conditions, as well as the wonderful progress that has taken place in recent years. Since the AMERICAN FOOD JOURNAL and others, known and unknown, have been knocking butter and boosting oleomargarine the price of butter has advanced ten cents per pound, and the packers are complaining of the slow sale of oleomargarine and doubtless wishing there was no butter to contend with, or at least that it should be subject to government inspection where they could get at it.

You inquire: "Are you willing that we file with the Bureau of Animal Industry and the Bureau of Chemistry the article appearing over your name in this issue of the AMERICAN FOOD JOURNAL, entitled 'The Storm Breaks,' in which you take it upon yourself to attack these bureaus?" Certainly, I am willing that you give it the widest publicity of which you are capable. You may have it read in the churches, if you desire, or publish it in the Congressional Record, provided none of your distorted conclusions are made a part of it. (When a statement of facts is distorted into an attack one must take some precaution.) We meant just what we said and do not care two whoops whom it hits, whether it be for their benefit, delight or scorn, and, for the purpose of relieving you of further embarrassment, you may treat this article likewise.

Your benediction in the closing paragraph is greatly appre-

ciated. You say: "You are taking a great deal upon your shoulders when you girdle your loins with the championship belt of the butter crowd. You have many battles before you, and, though the parting of the ways has come for you and us on this vital issue, we shall still say to you, as Bryan did to Wilson, 'God bless you!'" Now, I do not feel the load on my shoulders at all. As a matter of fact, it is a pleasure to try to set you fellows right. You are not all bad! There's lots of good in you! The great trouble is that you are dollar blind; the only thing you think of is to corral that dollar, and when you have it it creates an appetite for numerous other dollars. You see more and more dollars, and organize to capture the whole output, regardless of the rights of others.

As to the championship of the butter crowd, the butter-makers of Minnesota have it now, have had it for years, and we are proud of it. It does not chafe at all; it's soothing. If we had anything to do with the matter, we would award you the championship belt of the oleomargarine crowd. You are certainly deserving of it, and, inasmuch as no one wants it, take it anyhow, and though the road be long and the way devious, and although you may be unable to look a self-respecting cow in the face, yet notwithstanding that, I hope we will meet in heaven, where there will be no oleomargarine. Help yourself to the horse's radish; it will give you something to think of as you journey along.

J. J. FARRELL,

Pres. National Creamery Buttermakers' Association.

To all and any who have followed the Rotten Butter controversy during the past few months it must be obvious that the Butter President has gathered together all the stubborn, incontrovertible facts, together with the questions asked him by this paper and which he cannot answer without hurting the cause of explosive cream and its supporters and, rolling them into a bundle, flung them behind him with the contempt and offended dignity of a holier-than-thou, self-righteous Solomon.

Taking up a very few of the questions asked by us in the March issue of the Journal, he stumbles pitifully, knocking his knees against the stones of his own structure, and, with the head that was put upon his shoulders for the purpose of straight and lucid thought, dodges issues and twists his mental frame like some uncanny contortionist of the spirit world.

Upon a perusal of the Butter President's rambling and disconnected attack, we are given to wonder what he has wanted to say, what strange disturbance is affecting the good man, what is really the trouble with his pulse, his respiration, his thinking apparatus. Something is evidently wrong somewhere in Minnesota, and that not far from St. Paul. Maybe it is the climate. Perhaps, the affair in Mexico. People are affected differently by the same current of events.

However it may be, the fact remains that Butter President Farrell has pricked a bubble. In common parlance, he has "shot his wad." He has used up his stenographer's time, the time of his "hired man," his own valuable time and efforts, the time of the State of Minnesota and the time of the National Creamery Buttermakers' Association, for the evident purpose of proving to THE AMERICAN FOOD JOURNAL that it is right in its stand against rotten butter and for the pleasure which he must have felt in taking a fall out of one Paul Pierce.

Yes, Mr. Butter President, your answer proves our case to a nicety, for you have not answered us at all, but, like the naughty boy that you are, dodged behind the dairy door in well-founded fear of the people's paddle, which will surely reach you yet.

Why do you attempt to brush aside the questions

asked you in our March issue if you are really not afraid to answer them?

Does a man fear his own shadow?

For the sake of your noble cause, out of deference to a badly battered skeleton in your dairy closet, it behooves you of gentle zephyrs to brace up and step out into the open. Don't cavil. Answer the questions put to you. Be a good Butter President and stand by your guns. Don't hide behind them. Answer these questions or be a mouse:

Do you own a creamery?

Do you own, or have you any interest or stock in any creamery associations or companies?

Are you in a position to treat the food product butter in the same manner and on the same basis as other products manufactured and sold in the state of Minnesota?

Do you believe in standards for food products, and on this subject did you not vote in favor of the adoption of certain standards at the meeting of the Food Commissioners in Berkeley, August, 1915?

Do you consider in arriving at a standard that the food manufacturers should be consulted and their word taken as the final judge of what is a fair standard for the food product that particular manufacturer creates?

Laying all prejudices and bias aside, what do you consider as a fair butterfat standard for butter? What is a fair moisture content standard for butter?

You have admitted that you are against both of the standards as promulgated and recommended by the federal government and the various state governments. You mention the decision of the United States Circuit Court of appeals with reference to the regulation of moisture content in butter. This decision does not hold that 16% is a just or unjust limit. It is to the effect that the Secretary of the Treasury has not the authority to say arbitrarily that 16% constitutes an undue amount of moisture in butter, and that therefore the federal government should have introduced testimony at the trial of the case to prove that moisture was added to the butter with the intent to defraud; that is, that butter containing 12% of moisture might be adulterated, if the manufacturer, be he creameryman or farmer, had maliciously and fraudulently added moisture to the finished butter with the intent to deceive and defraud his customer. On the other hand, butter manufactured without intent to defraud and without having additional moisture incorporated into it by the manufacturer might contain 16%, 18% or perhaps 20% moisture without being adulterated; that is, it had not been so manipulated as to contain an undue amount of moisture with the fraudulent intent of the party who made it.

Tell us, pray, is it not a fact that the butter man of today watches his overrun? Is it not a fact that the dairy press has been full of data concerning overrun, that the press admits that today 25% overrun is proper, whereas ten years ago this would have been considered criminal?

What of the creameryman who stops his churn and has a chemical analysis made of the product, and where he finds that it contains too little moisture, carefully adds water to the product? What of the creameryman who by careful manipulation and control of the temperatures so manipulates his churn that he can get 15.90% moisture into the finished product? Do you call him a good citizen of Minnesota, and are you as food commissioner and the sworn officer of the law willing to vouch for this gentleman?

Do you consider the use of neutralizer by your Minnesota creameries as a decent act, and do you consider that by the use of this and the manipulation of rotten cream so as to produce butter that tastes fair, that they are treating the citizens of Minnesota in a fair, proper and just manner, or do you consider that the citizen who buys this manipulated product has been cheated?

What would your Minnesota citizen pay for white butter, this is, what would he pay for "natural color" goods, particularly in the winter time? Do you think he would buy it at all, or would he pay more than 10c or 15c a pound for it?

Now, let your creameryman color it as he does, and let him

get the today market price for extra or first butter—do you consider that the consumer has been defrauded out of any money by this artificial coloration undisclosed by the manufacturer?

Do you agree with other food commissioners when they say that butter artificially colored should under the law be marked with the words "Artificially Colored"?

Do you pretend to believe that the legislature meant to wink at the fraud when the definition of butter, as quoted by you, was written into the statute? Is it not true that the only sensible explanation of the definition "The food product usually known as butter and which is made exclusively from milk or cream, or both, with or without common salt, and with or without coloring matter" is that the product might be colored or might be left uncolored? In either event it is still butter, and that is all that could possibly be meant by the permission given to color the product. Does your pure food law require, however, that where coloring is introduced into any food product, particularly where it is done with the intent to deceive or to make the product appear better than it really is, that the product must be labeled with the words "Artificially Colored"? At least, this is the understanding had by the federal authorities and by food commissioners of experience.

Do you by your remarks aimed at the inspected and passed act mean to condemn or make light of federal inspection of meat food products?

Do you also mean to condemn the Gould amendment to the Food and Drug Act with reference to net weight?

Are you opposed to federal control of food products?

Do you believe that the small manufacturer should have one standard for law enforcement and the large manufacturer a different and higher standard?

Are you willing that we file with the Bureau of Animal Industry and the Bureau of Chemistry the article appearing over your name in this issue of The American Food Journal, entitled "The Storm Breaks," and in which you take it upon yourself to attack these bureaus?

Is your article written as a state official or as an officer of the Creamerymen and Buttermakers' Association, or as the owner of a creamery? You were quoted in the Chicago Daily Produce of February 8 as being present at the Eau Claire meeting of a Wisconsin buttermakers' association, at which meeting the following resolution was rejected: "Resolved, That this association is in favor of a new law compelling all creameries to pasteurize all cream made into butter." Are these your sentiments?

Answer these questions!

You were imprudent and foolhardy in presuming that you could Samsonize your prowess with the jaw-bone of an ass. You were tempting the Fates when you undertook to conquer the giant Truth with David's pebble. Those wonders happened ages ago and it is not recorded that the family name of either the shepherd king or the strong man was Farrell.

Come down to earth and be a good fellow. Bear in mind that you are not living in the days of the Spanish Inquisition: This is a poor day for the strong arm. Also put it down in your notebook that sneering denials never yet affected the actual status of a case the weight of a flea. Does this reach you, Mr. Farrell? Do you get the point? That yard or so of injured wife stuff dubbed by you, "A Gentle Zephyr," is so childishly petulant, so girlishly inconsistent, so brazenly contemptuous of proven facts that we are moved to pity for your great lack of vision.

You are badly misled if in your heart of hearts you delude yourself with the thought that you and your brothers of the churn can withstand the whirlwind now gathering strength for the undoing of a pack of wolves.

You will fall with the others, and rotten butter will be but a memory in the annals of food control. And

when you and your ilk have gone your way, a clean and wholesome state of affairs will come to exist. People will not be afraid to eat butter, because those making it will be representative of a higher and broader type of business honesty, which will naturally instill the masses with confidence.

The hand-writing on the wall is plain to him who will see. Your house is a tottering structure, your staff a broken reed. Our best wishes to you, Mr. Commissioner, and that the butter half of your dual personality may die a peaceful death!

HEARING ON COVERED HAMS AND BACON.

The question whether hams and bacon covered with gelatine, paper, stockinet, or cloth are "in package form" was threshed out again in Washington during the month. If such meats are "in package form," they must be marked with net weight at time of entering interstate commerce. The Department of Agriculture has already ruled that covered hams and bacon are not required to bear net weight declarations.

The hearing, which was held before Solicitor Caffey and Dr. Alsberg, was at the request of a faction of the Wholesale Grocers' Association. Mr. Rockwell of Breed, Abbott & Morgan, Mr. Bode, of Reid Murdoch Company, and Mr. Newton, a Chicago attorney, represented the Association, and claimed that covered hams and bacon were "in package form" and should be marked with the net weight.

The packers of ham and bacon were represented by Geo. P. McCabe, former solicitor of the Department of Agriculture; C. J. Tressler, attorney for Swift & Company; A. B. Stratton, attorney for Armour & Company; Emil J. Cohen, attorney for Sulzberger Sons Company, and by a number of practical packing house men. Representatives of the Retail Grocers' Association of Illinois, and of the Butchers' Association were present.

At the conclusion of the hearing, which lasted two days, Solicitor Caffey decided that each side might submit briefs, and this it is understood will be done.

The packers showed conclusively that the purpose of covering hams and bacon is partially to prevent shrinkage, and to protect the meat from contamination by dirt and insects. They also brought out the fact that in all cases the purchaser has the option to purchase such meats either wrapped or unwrapped at the same price per pound, and that many prefer to buy the wrapped product at gross weight because of its advantage to them. Practical packing house men produced experimental data which showed that the shrinkage of the ham and bacon always exceeded the weight of the coverings. The packers' attorneys alleged that in this fact lay the real reason for the strenuous efforts of the jobbers to secure a reversal of the Department ruling. They pointed out if the net weights were marked on covered hams and bacon, the jobbers would sell at that weight and their customers would stand the shrink which takes place while the meat is in the jobber's possession, whereas now also that in the cases where the covered hams or the jobbers would sell at that weight and their customers would stand the shrinkage which takes place while sides of bacon were sold to the consumer in the piece, the consumer would buy at marked weight, which would be grossly incorrect because of shrinkage and would thus be defrauded.

The representatives of the jobbers replied to this point by the savage assertion that "it was none of the

packers' business," but one of the leading Washington dailies in its news report of the hearing seized on this aspect of the controversy as the dominant one. The Washington Herald says:

"The controversy appears to be another one of these trade rows which are constantly called to the attention of the Department. It is held that the wholesaler is anxious to buy his smoked meats with the net weight mark stamped in order that he may sell at that net weight in spite of the fact that after being kept for a few weeks in his warehouse there will be a shrinkage on each piece of several ounces.

The representatives of the Retail Grocers and Butchers asked that the Department change its ruling as a convenience to the transaction of their affairs, but Solicitor Caffey explained to them that the Department officials were not legislating, but were bound by the law as passed by Congress.

Taking the hint from the solicitor, the packers' attorneys cited and discussed the legal authorities on the question in issue. It developed that the legal authorities were unanimous in holding that covered hams and bacon were not "in package form" within the meaning of the net weight laws, the list including a decision of the Supreme Court of Nebraska, and the opinions of the Attorneys-General of all states where the question had been raised under a statute similar in terms to the Federal Food and Drugs Act. The attorneys for the jobbers were unable to present any legal authorities or opinions to support their views, and merely criticized the opinions which held against them.

While no intimation was given by any official as to what will be the decision of the Department, it is believed the present decision will not be disturbed. It seemed to be conclusively established at the hearing that the law covers packages of arbitrary size and form which are sold at a package or piece price, and not by weight. Covered hams and bacon are always sold at scale weight at time of sale, and never at so much per ham or side of bacon. The size of the ham is controlled not by the packer but by nature, and the form is the shape of the ham and not in the form fixed by the contour of the package.

NEW FLOOD COMMITTEE.

It has been estimated that \$100,000,000 dollars' worth of corn, wheat and other foodstuffs are destroyed each year by the overflow of rivers in this country. In the Mississippi river alone 68,125 square miles of bottom land, a sufficient area to support a population of 25,000,000 people, is yearly devastated, and thousands of lives lost because the lands along these rivers are unprotected at times when an unusual flow causes breaking of dams or levees or flows over banks that are not protected in any way from floods.

The claim is made that on account of the overworked conditions of the Rivers and Harbors Committee, this subject has not come in for its just share of consideration.

A two and one-half hour discussion in the House of Representatives ended in the adoption of a resolution to constitute a new committee to work out the solution of the great problem to prevent the destruction of lives and property.

The recent flood in California indicates the prompt necessity of action such as is contemplated by the work of this committee.

Congressman J. Charles Linthicum of Maryland Attacks Butter Crowd in Lower House. Demands Federal Regulation and Inspection of Dairy Products.

(By SPECIAL WIRE FROM WASHINGTON.)

WASHINGTON, D. C., Apr. 1, 1916.—Federal regulation and inspection of milk, butter and other dairy products was demanded today in Congress by Representative J. Charles Linthicum who in a stinging arraignment of the butter and dairy interests asked that action be taken on "House Resolution 137," calling for the appointment of a committee to investigate the truth of charges that milk, butter, ice cream and other products of milk are, in many cases filthy, disease breeding and unfit for human consumption.

In a speech that held the attention of the house and galleries Representative Linthicum said:

"Milk and milk products enter more universally and intimately into human health and happiness than any other of all the foods. The safety and good name of milk and milk products, therefore, should be guarded by the federal, state and municipal authorities more carefully than any other food. Yet strange to say, somehow Congress has given less attention to these, the greatest of all human necessities, than to any other question materially affecting the health and prosperity of our people. So far as the federal government is concerned dairies, creameries, centralizing plants, and butter factories may be said to 'run wide open.'

"Under these conditions it is widely claimed that the most outrageous and extensive crimes are committed against the lives and property of the American people and the most stupendous frauds against the revenues of the government, and the good name of American made goods in foreign markets.

"If these charges are true then the Congress ought at once to enact adequate laws for prevention. If they are untrue then there should be a definite ascertainment that they are untrue, so that all our people may freely and increasingly avail themselves of milk and milk products, known to be the healthiest and most nutritious of all the foods when produced and distributed under proper sanitary methods.

"I do not pretend to have personal knowledge, but I feel it my duty to call the attention of the Congress to some of the charges which are made against the dairy industry in this country, and to press upon your attention the importance of the investigation called for."

A résumé of the charges told and conclusions reached by Representative Linthicum included the following:

Dairies, creameries, centralizing plants and butter factories "run wide open" so far as the federal government is concerned.

Filthy cream, often in a putrid state, is frequently shipped great distances to creameries to be made into butter.

An examination of 1554 lots of cream shipped to creameries and cream buying stations showed that 967 lots were of third grade, i. e., cream that is dirty, decomposed or very sour.

Hoard's Dairyman (a dairy journal) says, "The large central creameries have been the chief, though not the only, sinners in this respect. They have invaded the territory of the local creameries and forced them to let down the bars to all that is bad in cream."

A. W. McCann, New York pure food expert, says, "that in a Chicago creamery he saw men pick up flaps of butter from the floor, dripping with dirty water, and put them back in the tubs and that the product was called pasteurized butter." He also says that in one Wisconsin creamery he saw rotten cream neutralized with whitewash.

Much of the fresh, golden, "June color" of butter, according to the American Food Journal, is produced by the use of annatto. Wagner's Chemical Technology, published in 1887, says that annatto is utterly unfit for butter coloring as it is frequently made up with animal excretions and swarms with bacteria.

Nauseating as are the charges of filth, another count charges that these products are among the most active agents in the spread of disease.

Tuberculosis is one of the diseases that may be passed from animal to man. Tubercle bacilli are frequently found in milk and butter. Hoard's Dairyman says, "It is now thoroughly well recognized that this danger is very much greater in the case of infants and the young rather than with adults. The by-products are not the only substance that offer the means of carrying diseases. We know that some investigators found that out of 1,233 samples of butter examined 163, or 13.2 per cent, were found to contain these organisms."

It is charged that certain butter factories have practiced fraud. The annual report of the secretary of the treasury for 1915 says: "One case was discovered during the current year where the amount out of which the government has been defrauded reached a total of \$1,503,203.30, all of the product in this case, while not butter, was placed on the market as butter without payment of any tax."

Much butter contains too much moisture.

Much contains too much salt.

The problem involving the milk producer shall be regarded not at all as his problem, but a matter in which the whole nation is directly and indirectly involved.

"It is claimed," continued the speaker, "that practically all the other huge frauds discovered by the Internal Revenue Bureau, about which so much recently has been said in the papers, have been committed by butter factories and butter dealers. Butter factories being free from inspection, it is said, are able to get into their factories oils and artificial coloring and thereby greatly increase their output, which they sell as and for butter; thus they defraud the government of its taxes, and the dealers and the consumers in the character and price of the article. It is also charged that butter dealers procure the pure white product of certain manufacturers of oleomargarine, who also furnish the dealer with artificial coloring matter; and, that these dealers, often in very crude and unsanitary ways, artificially color this white oleomargarine and sell the same for butter. In this way these butter dealers, too, defraud the government of its revenues, and the consumer in the price and character of the article.

"In the leading editorial of the December, 1915, American Food Journal, it is said: 'For some considerable time past the question, of the unwholesomeness of butter as it is marketed today and the consequent danger to health incident to its consumption have been very generally discussed by the daily press and the creamery trade papers, creamery men's associations, food commissioners, woman's clubs, and medical associations. It would be quite in keeping with this knowledge and moreover, consistent with sound business policy for the American creamery man immediately upon the assembling of Congress to demand that the Department of Agriculture take over the supervision of the manufacture of butter and cheese and establish a system of inspection. Should the con-

fidence of the American people in dairy products be weakened or shakened, the consumption of these products would very naturally suffer a decline. The national dairy council's decision a few days ago to expend some \$600,000 in promoting a larger consumption of dairy products will result in a useless waste of money if the adverse publicity now appearing in the columns of the press is allowed to proceed; and since there is no good or valid defense against the truthfulness of this publicity, we believe that our suggested solution of the difficulty is the only one practical. The trend of the times is for better food, better health, better living conditions, better physical men and women, better things to live for. The people have suddenly come to a realization of their needs, their ills and their rights."

PROFESSOR GEO. E. PATRICK.

Word comes from Washington of the death of Professor George E. Patrick, Chief of the Dairy Division, U. S. Department of Agriculture. An exceptionally active and interesting career is ended. A bright and broad mind, a busy and brilliant brain has passed into the beyond. Earthly friendships and many of them are severed. Broken hearts are again united. In a few years all who have benefited by his cheery presence will have joined the majesty. In a still longer time all that his busy mind has wrought in the scientific world will be forgotten and instead of desired earthly immortality will come what has been referred to by the pessimistic Persian poets as the second death. But there will be something in Professor Patrick's personality, about his bright and cheery presence, which made the sun seem to shine on the gloomiest day, about his quaint philosophy of life, his habitual goodliness which will live to the end of time or until God's purpose is made manifested to men.

Professor Patrick had been in poor health for several months, but was at his office in the Bureau of Chemistry until the afternoon of Saturday, March 18, on which day he consulted a physician who advised him to go to his home and lie down. He remained in his room, but was not confined to his bed all the time, until Tuesday, March 21. Though he became somewhat delirious on Sunday, his condition was not considered serious. On Monday, March 20, he notified the Bureau that he was ill and not able to be at his office. Tuesday night he became worse and at eight o'clock Wednesday morning the end came.

Dr. Patrick is survived by a brother and sister. The former was traveling in California at the time of the doctor's death. It was necessary to postpone the funeral service until March 27 to enable the brother to reach Washington. Nearly the whole of the scientific colony attended the funeral preceding the cremation of the body, showing the high esteem in which the doctor was held by workers in the field in which he had labored. His colleagues in the bureau of chemistry attended in a body to show their appreciation of his worth and to express their sympathy for Miss Patrick, the doctor's sister, who had lived with him after the death of Mrs. Patrick in 1909.

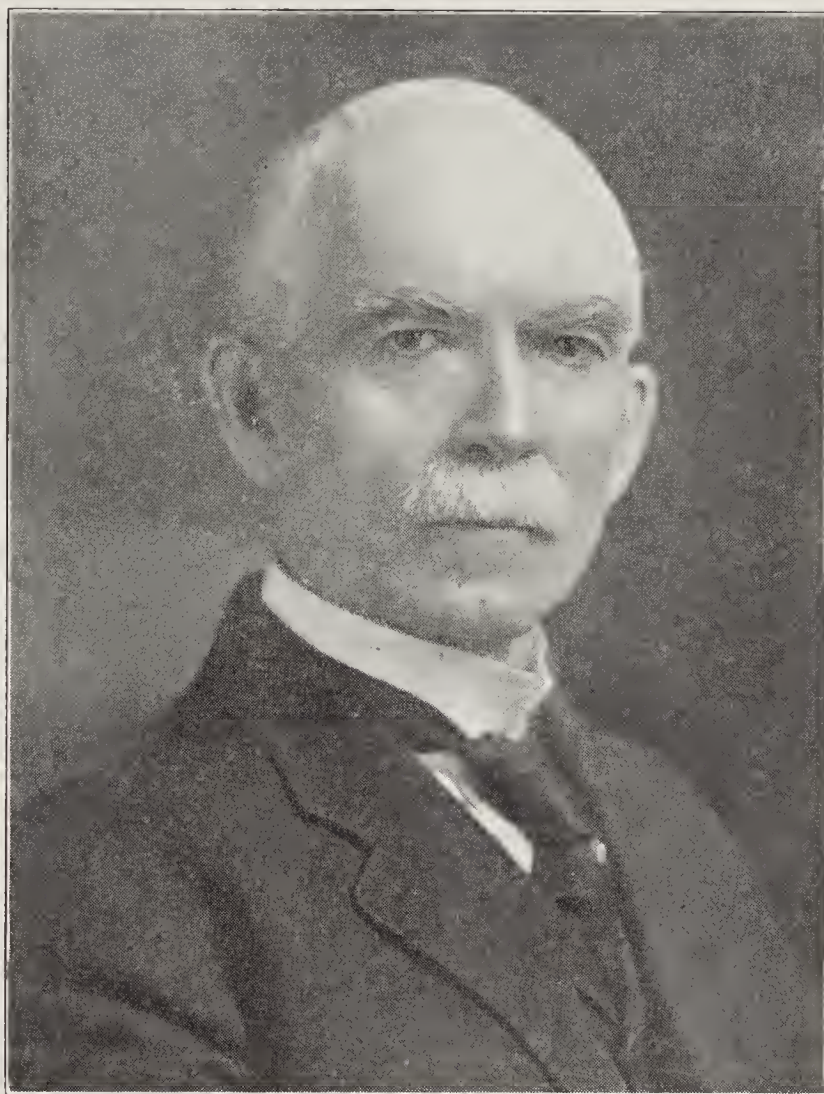
George E. Patrick was born in Milford, Worcester county, Massachusetts, in 1851. He attended local and preparatory schools and later Cornell University, from which he was graduated in 1873. He was appointed instructor in Quantitative and Agricultural Chemistry in Cornell under Prof. Caldwell. One year later he was called to the chair of chemistry in the University of Kansas. Having become particularly interested in mining and metallurgy he became manager and superintendent of the Oregon Mountain Mining and Smelting Co., intending to develop property in southern New Mexico. When this company suspended operations he became chemist of the Bradley Fertilizer Co., of Boston, then the largest manufacturers of artificial fertilizers in America.

In 1888 on the organization of the Iowa Experiment Station, Prof. Patrick became its first chemist. Later he held the chair of Agricultural Chemistry at the Iowa State College in connection with his duties as chemist of the Experiment Station. In 1892 he was appointed chemist to the Iowa State Geological Survey. In 1894 he became Chief of the Dairy Division, U. S. Department of Agriculture, the duties of which position occupied him to the time of his death.

He was united in marriage to Hattie L. Patrick during his residence in Lawrence, Kansas. Mrs. Patrick died in Denver on their second honeymoon trip, the twenty-fifth anniversary of their marriage. The professor never completely recovered from this blow and made yearly pilgrimages to the shrine he erected at her grave.

The material is not at hand for a complete biography of his scientific works, nor is this the time or occasion for publishing same. While at Lawrence he published in *The Scientific American* an important contribution to the baking powder controversy. Experiments on sugar beets, sorghum, field crops, milk, butter and cheese and kindred agricultural subjects occupied his attention at Ames.

One of his important contributions to agricultural science was the composite sample in paying for milk on a butter fat basis, which, with the Babcock test, placed the creamery and incidentally the cow on a business basis. His own test for milk fat, the "Brine Test," was a practical quick test, but was displaced by the Babcock centrifuge and bottle, the supremacy



The Late Professor Geo. E. Patrick.

of which no one was quicker to see and acknowledge than Professor Patrick. Professor Patrick also invented and described an automatic milk pipette not liberally used on account of its first cost and fragility. Of late years he has worked on problems met with in enforcing the food laws in connection with dairy products, originating and modifying tests for process butter, ice cream, moisture in butter, etc.

If one good quality outshone another in Professor Patrick, it was fairness. While he was somewhat tenacious that his own work should not be overlooked, at least by deliberate intention, he was always willing and anxious to give others full credit for what they did. This applies particularly to those who worked under him in the laboratory encouraging them in this and in other ways to render their best service in the cause in which they were employed. He was intensely interested in his work and he expected others working with him to be equally interested. He cordially disliked shams and was not particular who knew it. He was of a sociable, likable nature and made life pleasant to those about him. Professor Patrick will be sadly missed.

First Food Condemnation Suit in Illinois Won by State — Precedent Laid for Future Cases Involving Eggs in Shell

THE first food condemnation suit ever instituted in a court of Illinois was disposed of on March 15 in the Appellate Court of the First District, when decision was rendered against the claimant, the Perfection Egg Co., of Chicago, which had appealed from the decision of the Municipal Court of Chicago, rendered in November, 1914.

As this is the first decision involving the condemnation of eggs in shell and will very naturally act as a precedent for all future prosecutions of a similar nature, the opinion of the Appellate Court, delivered by Mr. Justice Goodwin, is here given in full.

James McCarthy, a Chicago attorney, has had entire charge of the case from its inception and much credit is due him for the final outcome of the litigation.

This writ of error is sued out to reverse a judgment obtained by the People of the State of Illinois, condemning and confiscating fifty cases containing thirty dozen each, more or less, of shell eggs, obtained in a proceeding instituted under section 10 of an Act to prevent fraud in the sale of dairy products, and imitation or substitutes, to prohibit and prevent the manufacture and sale of unhealthful, adulterated, or misbranded foods, etc., in force July 1, 1907, and otherwise known as chapter 127 "B" of the Revised Statutes of Illinois. The statute in effect provides that any article of food, etc., that is adulterated or misbranded within the meaning of this act, or that is made, labeled or branded contrary to the provisions of this act, or that does not conform to the definition or analytical requirements provided in this act, and is being sold or offered for sale or exposed for sale within the state of Illinois, shall be liable to be proceeded against in any court of record, or before any judge thereof, or before any justice of the peace, within whose jurisdiction the same may be found, and seized for condemnation and confiscation. The section then provides for the manner in which proceedings are to be had.

The complaint alleged that the shell eggs, "being an article of food, were and are adulterated in this, that the said eggs * * * consisted in whole or in part of a filthy or decomposed or putrid, tainted or rotten animal * * * substance, and that the said eggs were then and there sold or offered for sale or exposed for sale within the state of Illinois," contrary to the statute.

The claimant defended on the ground that said eggs were not "held with intent to sell, offer for sale, expose for sale, or to be manufactured into a food product in manner and form as alleged in the complaint herein"; denied that said eggs more or less consisted in whole or in part of filthy, decomposed or putrid animal substance, and said that said cases contained a large percentage of good eggs, and that claimant was candling and sorting said eggs and separating the good from the bad, and using only the good eggs.

On the trial, the evidence fully supported the contention of the state with reference to the condition of the eggs, although it appeared that some of the eggs were good. The evidence further disclosed that it was the apparent intention of the plaintiff in error, hereinafter referred to as claimant, to subject all or a portion of the unwholesome and partly decomposed eggs to some renovating process, and then put the dried product on the market. On this state of the record, the claimant seeks to reverse the judgment on the ground that the eggs were not being sold or offered for sale or exposed for sale within the state of Illinois within the meaning of the

statute, and on the further ground that an entire case of eggs could not be confiscated upon proof that it contained a percentage of bad eggs.

The provisions of the statute are modeled after those of section 10 of the United States Food and Drug Act, with the exception that section 10 of the statute provides for the seizure and condemnation of adulterated articles when they are "being transported from one state * * * to another for sale." It therefore follows that the construction placed upon this statute by the Federal courts, and particularly by the United States Supreme Court, is at least very persuasive authority when similar questions arise under our own statute. In *Hipolite Egg Co. v. United States*, 220 U. S. 45, certain cans of eggs which were being transported from one state to another were seized under the authority of section 10. The eggs were the property of Thomas & Clark, an Illinois corporation engaged in the bakery business, which had shipped them from St. Louis to their own warehouses in Illinois. The evidence fully disclosed that the eggs were not to be sold in their original form, but were to be used in the baking business. It was therefore contended that the eggs were not shipped for sale within the meaning of the act. The court, after carefully considering this question, declared that "all articles, compound or single, not intended for consumption by the producer, are designed for sale, and because they are, it is the concern of the law to have them pure." This is, in effect, a holding that an article of food that is not to be used by the producer, is held for sale within the meaning of the statute, regardless of the state or condition or form the article may be in at the time it is ultimately sold. It would seem that there can be no doubt about the soundness of the conclusion of the court, for the legislative authority had very clearly indicated its intention that adulterated articles of food should not be transported for sale at all, no matter what the intention of the shippers might be in regard to the ultimate form that the articles might take. The language of the court is equally applicable to the case at bar. Had the legislature elected to do so, it might have made an exception in favor of adulterated articles intended to be put through a renovating process, but it did not elect to do so, but chose instead to use comprehensive language identical with that contained in the federal statute. According to a well-established canon of construction, as it adopted the language of the federal statute presumably with knowledge of the interpretation given it by the Supreme Court, it intended to use the language in the sense in which it had been construed. (*Luken v. L. S. & M. S. Ry Co.*, 248 Ill. 377.)

The claimant's second point that the statute does not authorize the confiscation of an entire case of eggs upon proof that the case contains a certain or uncertain percentage of bad eggs, seems to the court to be without merit. If a case contains eggs that are adulterated within the meaning of the statute, the case as a whole comes within the 8th section of the statute, which expressly says that food is adulterated "if it consists in whole or in part of filthy, decomposed, putrid, infected, tainted or rotten animal or vegetable substance or article," and this seems to the court a wise provision, for it would certainly destroy the effectiveness of the statute if immunity could be given by mingling one or more good eggs with others that were rotten.

This case is clearly distinguishable from one where a

case of eggs, through circumstances beyond the control of the possessor, has in it some eggs that are bad, but where there is no evidence that such eggs are intended to be put upon the market in any form. In the case at bar there was ample evidence from which the jury could find that some, at least, of the eggs which came within the condemnation of the statute were held with an intent to sell them, within the meaning of the statute as hereinbefore defined.

Claimant also complains of the extra-judicial method by which the court separated the good eggs from the bad. As already indicated, we are clearly of the opinion that it was within the power of the court to condemn

the cases of eggs on account of the presence of the so-called adulterated eggs which are shown to have been held for sale in violation of the statute. While the court might, to prevent hardship, order an inquest for the purpose of determining what eggs were good, and turn them over to the claimant, it was not required to do so, and therefore the manner in which this was done is not one of which the claimant can complain.

Claimant's final contention that as there is a national food law, and as this was an interstate shipment remaining in the original package, it was not subject to the penalties imposed by the state law, is also without merit. The judgment of the Municipal Court will be affirmed.

Dealer Not Always Liable for Bad Product

FOOD circles have been much interested in a recent decision of the Appellate Division of the Supreme Court of New York, which plainly indicates an opinion on the part of the justices that the old principle that when a dealer sells a food product it carries with it an implied legal warranty that it is suitable for eating, is no longer sound, owing to the changes of time and custom. It is an opinion of great importance to every retailer.

The decision came in the case of Anna Mary Rinaldi vs. the Mohican Company, an appeal by the defendant from a judgment of the Supreme Court entered in the Schenectady County Clerk's office on December 22, 1915, in favor of the plaintiff upon the verdict of the jury for the sum of \$1,000; also from an order denying defendant's motion for a new trial.

Justices Kellogg, Lyon, Howard, Woodward and Cochrane sat and the opinion was written by Judge Howard, who outlines his views substantially as follows:

"The plaintiff became infected with a parasite found in pork and known as trichina. She purchased the pork from the defendant, a retail dealer. The meat appeared clean, good and wholesome. It also bore the United States Government stamp to the effect that it was sound and fit for consumption and free from defect. The plaintiff cooked the meat and she and her family ate it and were made sick. She has recovered a judgment against the defendant for the damages which she suffered, upon the theory that the sale of the pork for immediate consumption carried with it an implied warranty that it was sound and fit for use.

"It is quite apparent from the record that the defendant's store was clean and sanitary and that the defendant was absolutely free from negligence. There was no lack of care whatever in the handling or sale of the meat. So that we are confronted squarely with the question as to whether the sale of this meat under these circumstances did carry with it an implied warranty of fitness.

"Were this question being presented to this Court for the first time, I should rebel vigorously against following, in this instance, the common law rule of implied warranty proclaimed as far back as the days of Blackstone and adhered to in this state and quite generally in all the states of the Union.

"Many common-law doctrines established centuries ago are rejected by the courts as inapplicable to present day conditions. The rule that there is an implied warranty on the part of the vendor of foodstuffs, that goods sold for immediate consumption are fit and wholesome, is a doctrine no longer suitable, I believe, to modern conditions.

"This court has, however, twice, very recently, committed itself to the old rule (*Race v. Krum*, 162 App. Div., 911, reported on re-argument 163 App. Div., 924; *Leahy v. The Essex Co.*, 164 App. Div., 903). Frequently where courts follow slavishly in the footsteps of precedent they fail to do justice and are conscious that they are failing to do justice. But, although going contrary to their judgment, they feel bound by the established law.

"In the *Race* case, decided in March, 1914, I dissented from the application of the doctrine of implied warranty, as did also Justice Woodward. However, a majority of the court

adopted the old rule. In July, 1914, we decided the *Leahy* case, again adopting the common-law doctrine. Now we are asked to distinguish this case from the *Race* case. Unless we are to make this court ridiculous, I do not see how we can do so.

"The implied warranty rule rests upon a principle of public policy. The reason for that rule is stated in *Wiedeman vs. Keller* (171 Ill., 93) as follows: 'It may be said that the rule is a harsh one, but as a general rule, in the sale of provisions, the vendor has so many more facilities for ascertaining the soundness or unsoundness of the article offered for sale which are not possessed by the purchaser that it is much safer to hold the vendor liable than it would be to compel the purchaser to assume the risk.' If this is the principle on which the rule rests no amount of care can relieve the vendor. The Government stamp adds nothing to his position, for he has warranted the goods, and whether he has been careful or careless is of no concern.

"This doctrine was applied squarely by the Supreme Court of Illinois in *Wiedeman vs. Keller* (supra), where many leading authorities were examined. That was a sale of meat, and was practically parallel with the case before us. In view of the attitude which this court has assumed, the *Wiedeman* case should have great weight with us. In *Bigelow vs. Maine Central Railway* (85 Atl., 396) the Supreme Judicial Court of Maine rejected the common-law doctrine as not being applicable to canned asparagus.

"Personally I approve of the doctrine there propounded. This court, however, having so recently twice taken a contrary position on the subject, it would be better, I think, to allow the Court of Appeals to dispose of the question in this state than for us to attempt to make a distinction here and thus inject confusion and perhaps ridicule into the law. The judgment should be affirmed."

The decision was the subject of a long editorial in the New York "Law Journal," which approves the change of front on implied guaranty and says in part:

"We are firmly of opinion that both on principle and according to justice and expediency a restaurant keeper should be held liable only for negligence, and not as an absolute warrantor of the quality of food furnished to patrons.

"On former occasions we have suggested that a line should be drawn, somewhat arbitrarily if necessary, to distinguish between cases of restaurant keepers and those of retail dealers in food. Abstract logic, however, favors the ground taken in the present opinion, and perhaps it was more fitting to leave the differentiation of the two classes of cases or, better still, the determination that both retail food dealers and restaurant keepers are liable not as warrantors, but only for negligence, for the Court of Appeals.

"Justice Howard quotes the reason for the implied warranty rule. Under modern conditions the reason for this rule is every day losing its force. We think the courts may well discard the principle of implied warranty as to retail dealers as well as restaurant keepers and limit the ground of action against both of them to negligence."

Interior Quality of Market Eggs—Eggs of Complex Structure—Study of Nature of Different Parts Leads to Understanding of How to Handle Eggs in Order to Keep Them in Best Possible Condition

By EARL W. BENJAMIN

IT is very probable that comparatively few persons understand, as thoroughly as they wish, the processes and factors concerned in the production and handling of eggs for use as food. During the last few years it has become generally known that eggs are greatly affected by the conditions under which they are kept, as well as by the length of time they are kept. The reasons for this, the changes that occur, and the methods of detecting the interior quality of the eggs, should be more thoroughly understood by every one who is concerned with the production or consumption of eggs.

The purpose of this bulletin is to give to producers and consumers some information relative to the interior quality of eggs. To the former this is given so that they will be able to produce the quality that is demanded; to the latter, so that they will be able to buy more economically, and will know what properties to demand in market eggs. It is hoped that the bulletin may serve as a reference for purchasers and as a guide for producers and market men.

Each normal egg of the domestic fowl contains every essential for the maintenance of life and the development of a normal embryo during a period of twenty-one days. Every time a hen lays a fertile egg she reproduces herself. An egg must therefore be of complex structure, and a study of the nature of the different parts should lead to an understanding of how to handle eggs in order to keep them in the best possible condition.

The egg-producing organ of the domestic fowl, the oviduct, is located in the rear part of the body cavity. It is in this organ that the egg structure is completed. The yolk of the egg is the first part to develop; this process takes place in the ovary, which is located close to the backbone of the fowl. The ovary contains many hundreds of minute yolks. If a normal fowl is killed while in laying condition, these yolks are found in all stages of development. Each yolk is enclosed in a sac, or follicle, through which it obtains its nourishment while developing.

When the yolk becomes mature the funnel-shaped opening of the oviduct rises and envelops the yolk sac. The yolk sac then splits along the suture line and allows the yolk inclosed in its vitelline membrane to escape and begin its passage through the oviduct. If the egg is to be fertilized, the fertilization occurs just after the yolk has entered the oviduct and before any of the albumen is deposited. As soon as the yolk escapes from the yolk sac, the sac contracts and usually remains as unabsorbed tissue. Some experimenters have found that the approximate number of eggs produced by a fowl can be roughly determined by counting the number of empty yolk sacs in the ovary.

About forty per cent of the white, or albumen, of an egg is said to be laid on the yolk as it passes down through the upper half of the oviduct. The albumen deposited at this time probably represents the two dense inner layers of albumen and the chalazæ.

After the yolk has passed this albumen-forming region, it passes into the isthmus, where the shell membranes are added

with ten to twenty per cent more albumen. By this time the egg is beginning to assume its final size and shape, and it now passes into the uterus, where the remainder of the albumen, about forty per cent, is added, and the shell is formed. The egg then passes through the vagina, where some of the shell pigment and the outer gelatinous coating of the shell are probably added. Then it is ready for expulsion from the body, through the cloaca.

These glands excrete their substance when irritated by the approach of the incompleated egg through the oviduct. Some observers have found that eggs expelled from the body prematurely were insufficiently colored, due probably to their rapid passage through the vagina.

The shape of the normal egg is probably determined by many factors, including the tension of the oviduct walls and the size of the egg. If we consider the shape of the egg to be the result of the physical forces in the oviduct walls, tending to push the egg forward, it is the natural assumption that these forces would tend to make the rear of the egg pointed. Nearly all authorities agree, however, that the egg is not always laid blunt end foremost. This would indicate that the foregoing theory of forces is at fault, or that the position of the egg often becomes reversed in the uterus.

The yolk is gradually developed in the yolk sac by the addition of concentric layers of yellow around an inner vesicle of white yolk. According to Lillie, the yellow yolk is laid on daily in regular layers, separated by very thin strata of the white yolk. As the yellow yolk is laid on, the germinal disk moves gradually outward, always remaining close to the vitelline membrane. This moving disk leaves a path behind it, filled with white yolk, across which no yellow yolk is deposited. Professor C. A. Rogers has found that about fourteen days are required for the full development of the yolk from its original minute size. The layers vary in thickness, as might be expected, probably owing to physical conditions of the bird, rate of laying, and the like. When the yolk is mature the germinal disk appears as a light-colored spot on the surface.

The first albumen to be deposited on the yolk is the very thin, dense layer, close to the vitelline membrane and continuous with the chalazæ. The chalazæ are attached at opposite sides of the yolk, extending out into the albumen toward the ends of the egg. The size and position of the chalazæ vary in different eggs; they may be twisted up close to the vitelline membrane or extended out into the thin albumen. A white, fibrous thread usually runs through the center of the chalazæ, and this is surrounded by the dense, partially transparent albumen. In normal eggs the yolk is lighter than the albumen, and tends to rise and stick to the shell; in very stale eggs the yolk tends to sink. The chalazæ act as a drag in either case, preventing any rapid change in the position of the yolk. The chalazæ allow the yolk to spin on the longitudinal axis of the egg; this allows the yolk to always swing around so that the germinal disk is on the upper side, which is essential in order that the germ may

receive the maximum amount of heat from the sitting hen or the incubator.

Next to the dense inner layer of albumen there is a thicker middle layer having somewhat less density. This layer varies in thickness and may be distinguished by its jelly-like appearance when the egg is opened into a dish. The third, or outer, layer of albumen, next to the shell membranes, is very watery and transparent. The inner, outer, and middle layers make up the albumen, or white, of the egg. Outside of the albumen are the inner and the outer shell membranes, which are added in the isthmus. These consist of a network of organic fibers. The inner membrane is of finer texture than the outer one, although the fibers in both are nearly transparent. The two membranes serve to protect the contents of the egg from outside sources of contamination.

The shell is a calcareous deposit added to the outer shell membrane in the uterus. The shell seems to consist of three layers, as stated by Lillie.

When the egg is first laid, it is completely filled; but as soon as it cools, the contents contract and an air space is formed, usually between the two shell membranes and at the point where these easily divide. This air space usually forms at the large end of the egg, and is about one-half inch in diameter in the normal egg.

A part of the characteristic pigment and all of the bloom, or gelatinous coating, of the egg, is secreted in the vagina. This outside pigment may be removed with sandpaper or any similar abrasive substance. The gelatinous coating is easily dissolved by water or acids.

The composition of hens' eggs is somewhat variable, but is approximately as given in Table 1:

TABLE I.—COMPOSITION OF HENS' EGGS.			
	Yolk	White of egg	Whole egg
	(percentage)	(percentage)	(percentage)
Water	46—52	80—88	70—76
Fat	30—35	Traces	9—14
Protein	14—16	10—13	10—15
Shell and shell mem- branes			9—12

From Table 1 it is seen that the whole egg usually contains over ten per cent of fat. Nearly all of this fat is in the yolk, and obviously the fowl must have a surplus of fat before the yolks can begin to develop. The eggs of ducks, geese, turkeys, guinea fowls, and other birds vary to some extent from the analysis noted above, but the differences are slight.

The detailed analysis of hens' eggs which follows is taken from Simon's textbook of physiological chemistry:

Analysis of shell (9-11 per cent of whole egg).	
	Percentage.
Calcium carbonate	90.00
Magnesium carbonate	Small amount
Calcium and magnesium phosphate.....	Small amounts
Water	1.00

Analysis of albumen (60.5 per cent of whole egg).	
	Percentage.
Water	80.00-86.68
Solids	13.32-20.00
Albumins	11.50-12.27
Extractives	0.38- 0.77
Glucose	0.10- 0.50
Fats and soaps	Traces
Mineral salts	0.30- 0.66
Lecithins and cholesterin	Traces

The mineral ash of the albumen has been found by Poleck and Weber to consist of:

	Percentage.
Sodium (Na ₂ O)	23.56-32.93
Potassium (K ₂ O)	27.66-28.45
Calcium (CaO)	1.74- 2.90
Magnesium (MgO)	1.60- 3.17
Iron (Fe ₂ O ₃)	0.44- 0.55
Chlorine (Cl)	23.84-28.56
Phosphoric acid (P ₂ O ₅)	3.16- 4.83
Carbonic acid (CO ₂)	9.67-11.60

Sulphuric acid (SO ₃)	1.32- 2.63
Silicic acid (SiO ₂)	0.28- 0.49
Fluorine (Fl)	Traces

Analysis of the yolk (29 per cent of whole egg).
According to Gautier we have the following:

	Percentage.
Water	47.19-51.49
Solids	48.51-42.81
Fats (olein, palmitin, and stearin).....	21.30-22.84
Vitellin and other albumins	15.63-15.76
Lecithins	8.43-10.72
Cholesterin	0.44- 1.75
Cerebrin	0.30
Mineral salts	3.33- 0.36
Coloring matter; Glucose.....	0.553

Poleck and Weber also give the following as the analysis of the mineral salts of the yolk:

	Percentage.
Sodium (Na ₂ O)	5.12- 6.57
Potassium (K ₂ O)	8.05- 8.93
Calcium (CaO)	12.21-13.28
Magnesium (MgO)	2.07- 2.11
Iron (Fe ₂ O ₃)	1.19- 1.45
Phosphoric acid, free (P ₂ O ₅)	5.72
Phosphoric acid, combined	63.81-66.70
Silicic acid (SiO ₂)	0.55- 1.40
Chlorine	Traces

According to Simon, the shell is made up of an organic matrix of the nature of keratin. This matrix is largely impregnated with lime salts. The pigments of the shell are said to be derived from the common pigment of blood. The shell membranes are also composed largely of keratin, with a small amount of mineral salts, principally calcium phosphate. The white of the egg is supposed to consist of compartments which are divided by thin membranes and which contain the liquid albumen. These membranes are continuous with the chalazæ and the shell membranes. The yolk consists largely of spherical cells, most of which are filled with fat.

The interior quality of eggs may be judged in various ways. If the air cell is broken so that the inclosed air merely forms a loose air bubble in the albumen, the contents of the egg will pound slightly when the egg is held in the hand and shaken vigorously. This is a common test, and eggs that shake in this way are often said to be rotten; however, they may be only evaporated. If the air cell is large, the egg should be handled very carefully or the inner shell membrane will invariably be broken, thus liberating the air as a bubble.

A fairly accurate method of learning the amount of evaporation that eggs have undergone is by placing them in a dish of water. A fresh egg will lie nearly flat on the bottom of the dish, but if the egg is slightly evaporated the end bearing the air cell will tip up slightly. This tendency to tip up increases with the degree of evaporation, until a very much evaporated egg will float on the surface of the water. This is a method that can be used by the consumer, but it does not show interior quality except so far as evaporation is concerned.

Mottled shells are often said to denote age in eggs, but this is true only to a limited extent. Black rots can sometimes be distinguished by a grayish appearance of the shell. If the shells are very smooth and glossy, this usually means that the eggs have been incubated for a considerable time. If the shells are stained, the eggs have been in contact with moisture and are usually inferior. If eggs are cleaned with acid, the shells appear very porous. Eggs cleaned in this way or by washing should usually be avoided if possible, for they will not keep well. Limed and water-glass eggs will usually bear deposits of the preservative in the pores of the shell, and they can thus be distinguished from fresh or cold-storage eggs.

In order to candle an egg correctly it should be held below the eye, thus enabling the observer to readily note the size of the air cell. The writer prefers a position about twelve inches in front of and the same distance below the eye. The egg is usually candled with the end containing the air cell held upward.

Educational Needs of the Canner

By GEORGE W. COBB

Assistant Sales Manager American Can Co.

An address before the New York Canners' Association at Rochester, at the recent State Convention.

UNDOUBTEDLY there is, and has been for many years, a strong and growing sentiment for advertising canned foods; today more real and insistent than ever, I believe, in advertising. I believe in advertising canned foods. I believe, above all, that advertising, like charity, begins at home.

Every cannery in this country, of which there are something like 2,500, is an advertisement for canned foods, either positively or negatively. I often wonder if we realize the influence of each cannery in a rural community, coming in contact, indirectly if not directly, with all people within a radius of say twenty-five miles, not only for labor or growers of raw materials, but as citizens. Every one is interested and talks about the cannery located in his town—good or otherwise—and how far their savings and influences may extend no one can know. Are we sure that they always speak well of us? We must first have the good opinion of our neighbors before we go out and tell the world how good we are. What of those "traveling advertisers," the automobilists who pass your cannery daily during the year? What impressions of the manufacture of canned foods are they carrying home to the city? Remember, we eat with our eyes and nose.

Wonderful advancement and progress has been made in the canning industry; improvements in construction, sanitary features, methods of handling waste and the condition of receiving and handling the fruits and vegetables coming to that cannery. Automatic machinery has been substituted for hand operations. The modern cannery is well lighted, thoroughly ventilated, conveniently arranged and built on the foundation of efficiency. Improvement is still going on, and the industry at large is making marvelous headway; it is evolutionary.

We who are identified with the industry know how good our canned foods are, how healthful and how cheap. But we must always bear in mind that it is not our standard and opinion that we must satisfy, but rather the standard of millions of people who eat the foods of their own selection. We must educate these people, and that can be done only by advertising. In my opinion it must start at home. We must remember that the so-called educated people of this country—your friends and mine—are ignorant in so far as canned foods are concerned. The workingman knows what canned foods are because he and his family live on them.

What are some of the things that the canner can do at home to advertise canned foods? Do your own personal friends know the axioms of the art of canning?

First—No secrets among canners.

Second—Preservation is accomplished solely by the application of steam heat.

Third—Canned foods are cooked, or sterilized, to insure preservation, after, and not before, being hermetically sealed in the cans.

Fourth—No chemicals or coloring matter are ever used; canned foods are natural products.

The local newspapers afford a splendid opportunity. All of you know the editor, and can tell him some of the good things, the real things that the canning industry is doing. Our trade papers almost weekly have articles of inestimable interest and value to local editors, who are no doubt as anxious for news as we are to read it. Therefore, educate the editor.

How much can be accomplished through the local grocers? Does the groceryman himself and his clerks know some of the things that he should know to sell your canned foods? Are canned foods in your town displayed on the shelves or in the cellar? How easy it would be to take a little of your time and tell him some things which would make it easy for him to sell canned foods.

The most influential class of people in the country are the doctors. They come into intimate association with our home, our family life, and what the doctor thinks goes. Does the doctor know what canned foods are? Have you taken the time to tell him? Cure the doctor.

Most of you are members of lodges or the grange. The chairman of the entertainment committee in the winter time is looking for new subjects. How glad he would be to have you spend half an hour in telling the members of the lodge or grange something of this wonderful industry.

What a wonderful opportunity to start the ladies advertising! Send around to the church supper a case of peas, a case of corn and a case of tomatoes—not all at once, because the church suppers are not large enough to eat so much at one time. Free samples dispel prejudice. The cannery should not only be open to visitors but they should be urged to come, and when they do come it should be a question of "open house," not a game of "hide and seek."

I believe in advertising and I believe in organization, in the National Canners' Association and in the State Association. I know some of the things that the National Canners' Association is doing, has done and will do. What in the line of advertising can it do? Would it not be a splendid scheme to have representative women visiting the domestic science clubs, telling the teachers of the next generation the wonderful story of canned foods? These clubs are interested in all subjects which have a bearing on their particular work, and is there anything closer to the domestic clubs than food? What could not that same kind of a representative do in visiting the schools, informing the cooking school teachers of the wholesomeness, cheapness, utility and variety of canned foods? Let us get this coming generation even though we may not have had this one. Teach the teacher.

What could be accomplished, by reaching, in like manner, the Hotel Men's Associations, which meet in every state several times a year, the chefs and stewards? The National Canners' Association could accomplish much through educating the grocery clerks. I dare say there is not a jobber or large retailer of canned foods in the country that would not gladly welcome a representative of the National Canners' Association to tell their salesmen how to sell their goods. What a virgin field for education is afforded by the stewards of the dining-car service! Surely the railroads are interested in a greater consumption of canned foods. Something like 13,000 people eat every day in the dining-cars and restaurants of the Pennsylvania system.

I leave to your imagination the possibilities of moving pictures in telling the story of canned foods to the consumers. All these channels carry publicity possibilities for the National Canners' Association. The National Canners' exhibit at the Panama-Pacific Exposition at San Francisco was correctly called a "live" exhibit—it lived and still lives in the minds of 700,000 consumers. All instructors or demonstrators should be outspokenly and admittedly representative of the National Canners' Association; with nothing to hide or conceal; to substitute knowledge for ignorance.

What of a department of the National Canners' Association laboratories, investigating the best methods of preparing canned foods for the table? Is the French chef mistaken because he heats the cans before opening them? If he is right, say so on the label to the American housewives.

A chief inspector, standing high in the estimation of the Department of Agriculture, appointed by and answerable to the National Canners' Association, will have charge of the work. As a result of that inspection I believe the quality of sardines is going to be very greatly enhanced and the industry placed on a high basis.



Notes from Field of Food Control



THE twentieth Annual Convention of the Association of American Dairy, Food and Drug Officials will be held at Detroit, Mich., August 7 to 11 inclusive. It is announced that the headquarters of the meeting will be the Hotel Statler. Judging from present indications it is safe to predict that the 1916 Convention will be a record breaker from the standpoint of attendance. Detroit is an ideal convention city and, furthermore, a beautiful spot in the summer season. The official program will be published in a later issue of The American Food Journal.

* * *

W. B. Barney, state dairy commissioner, believes that the 476 creameries in Iowa can save 25 to 30 per cent on their insurance by a strictly creamery risk company organized by them on a mutual basis.

* * *

The Federal meat inspection authorities have issued a notice to inspectors instructing them that "oil obtained from beef or mutton fats rendered at a temperature above 170 degrees F., should not be designated as oleo oil."

* * *

An expert from Swift & Company gave a lecture on the "Meat Packing Industry of America" to the School of Journalism at Columbia University on March 7th. This is one of the regular lectures endorsed by the Bureau of Commercial Economics of the Department of Public Instruction at Washington, D. C.

* * *

The test case at Yonkers under the New York state net weight regulations, requiring the marking of wrapped hams and bacon with the net weight of contents, has not yet been decided, and may be reopened. Judge Beall announced a decision sustaining the regulations, but attorneys for the packers asked for a rehearing to present new arguments. The court has taken this matter under advisement and may give them an opportunity to present the additional arguments.

* * *

In a decision at Washington recently the Interstate Commerce Commission found that rates of the Minneapolis and St. Louis Railroad on packinghouse products and fresh meats in carloads from Mason City, Iowa, to Arkansas and Texas points were not found to be unreasonable. On the other hand, its rates to Louisiana points were found unjustly discriminatory to the extent they exceed rates from Chicago by more than 2½ cents per hundred pounds on packinghouse products and 5 cents per hundred pounds on fresh meats.

* * *

The federal meat inspection regulation forbidding the transfer of inspected products in interstate commerce from one branch house of a company to another which is not under inspection, has caused much trouble because of the difficulty of its enforcement, and packers have been indicted by a federal grand jury in Connecticut for alleged violation of this regulation. This is in spite of every effort of packers to comply with the rule, and to instruct their branch house employees to do so. Two packing companies and their branch managers at Bridgeport, Conn., were indicted on 17 counts each, and another company and its manager at New Haven on two counts each.

* * *

TO MODIFY LABEL RULING?

The hearing on the request for the extension of the time to use up labels bearing the serial number was held in Washington recently and was attended by many representatives of the canning industry, as well as other industries affected.

Those representing the canning industry were Albert Betcher, of the legal department of Libby, McNeil & Libby; George G. Bailey, of the Fort Stanwix Canning Co., Rome, N. Y.; William H. Sears, of Sears & Nichols Co., Chilli-

cothe, O.; A. J. Hubbard, of the John Boyle Company, Baltimore, Md.; Alfred H. Beckman, secretary of the National Wholesale Grocers' Association; W. F. Bode, of Reid, Murdoch & Co., Chicago, and J. C. Puetz, of the Sprague-Warner Co., Chicago.

The National Canners' Association filed an extensive brief which presented the main arguments representing the several hundred canners who have labels on hand bearing the serial number and which amount in value to nearly \$450,000.

* * *

TAX ON COUPONS UPHELD.

By holding that the states have the power to impose taxes, large or small, on trade coupons redeemable in premiums, the United States Supreme Court recently put the legality of premium advertising, by which it is estimated \$125,000,000 worth of merchandise is sold annually, within the scope of state laws.

By the decision in the premium case firms giving coupons with cigars and tobacco, or premium slips of any kind, are entirely under control of the states for taxing purposes.

The court upheld the constitutionality of laws in Florida and Washington imposing such taxes and dismissed the appeal of F. S. Pitney of Seattle, convicted for violating the Washington trading stamp law in that he, as manager and agent of the United Cigar Stores Company in connection with a sale to a customer, issued a coupon.

The attack on the laws contended that the statutes were an unconstitutional discrimination against a legitimate method of advertising and within the protection for freedom of contract contained in the federal constitution.

The court, however, held it was for the legislatures to pass on the public policy involved in the questions and to adopt such regulation thereof as they might choose.

While the Supreme Court has never passed on the coupon issued before, it has been held constitutional in ten states, including Illinois.

A \$10,000 judgment against the Illinois Central Railroad was reversed by a ruling that "hoboes" and others who steal rides on railroad trains can collect no damages for injuries and are liable to penalties under the anti-pass law. The ruling was made in a case where the injured man was riding with the consent of the engineer.

Cases involving the interpretation and enforceability of the clause in the tariff act allowing a 5 per cent discount on goods imported in American ships were ordered by the Supreme Court to be argued a second time.

For the third time the court decided to review the right of a patent owner to fix the conditions and price of retail sale.

* * *

BARNEY WARNS AGAINST EXTRACTS.

In Bulletin No. 17, just issued by the state food and dairy commission of Iowa, Commissioner W. B. Barney warns grocers against the sale in quantities of lemon extract and advises them for their own protection to refrain from making this mistake. Lemon extract of the cheap terpenless grades is used as a beverage in many cases and may cause the prosecution of the seller under the prohibition law.

Following is the bulletin recently issued:

"For a number of years there have been on the market extracts of lemon, known as terpenless extracts. They contain no lemon oil but are made from the oil by extracting it with diluted alcohol of about 35 per cent strength. This extracts the flavoring principles from the oil. The cheapest grades of this terpenless extract is made from the citral obtained from oil of lemon grass. In recent years some manufacturers have been putting on the market terpenless extracts of fractional strengths such as ½, ¼ and 1/5 standard strength. These have little flavoring power and for the flavoring obtained are more expensive than the standard extracts which contain 5 per cent oil.

"These cheap terpenless extracts are liable to be used as a beverage and a grocer who sells it in quantity to an individual is liable to prosecution under the liquor laws of the state. Such practice is liable to cause the legislature to pass a law putting the extract business into the hands of the pharmacist in the hope of better control of its sale. Grocers are advised to refuse the sale of any extract in quantities to individuals as a matter of their own protection.

"After May 1, 1916, this department will consider misbranded and so-called fraction strength extracts offered for sale within the state and will contest their sale under the food law."

In Attorney General Cosson's letter to the food department, which accompanies the bulletin, Mr. Cosson says:

"Certain standards are established for the manufacturing and sale of flavoring extract and in the first section of the chapter is the following definition of it given:

"A flavoring extract is a solution of ethyl alcohol of proper strength of the rapid and odorous principles derived from an aromatic plant, or parts of the plant, with or without coloring matter, and conforms in name to the plant used in the preparation."

"The intent of the prohibitory statute is to prevent the sale of anything containing alcohol or other intoxicating liquor for use as a beverage or that is capable of being used as a beverage.

"Circumstances might arise where the sale of a flavoring extract would constitute a violation of the law as where a sale is made to an individual who, the dealer knows, uses the article as a beverage and intends to use the same as a beverage, or where the customer's purchases are so frequent that the dealer ought by reason of the fact to know that the article is being used as a beverage and not for the purpose for which it was manufactured. Prosecution of violations of the law would depend greatly upon the circumstances."

* * *

HOLDS ORDINANCE INVALID.

Corporation Counsel Samuel A. Ettelson of Chicago handed down an opinion recently, holding that a proposed ordinance compelling the closing of all groceries, meat markets and delicatessen stores on Sundays would be invalid and that the city of Chicago has no right to compel grocery, meat market and delicatessen stores to close on Sunday.

The opinion was asked for by Chief of Police Charles C. Healey, who was requested to get legal light upon such an ordinance by A. G. Hambrock, secretary of the United Grocers and Butchers of Chicago.

This decision, according to the enemies of the proposed 1 o'clock closing ordinance for restaurants now in the judiciary committee, will militate against the validity of such an ordinance should it be passed and tested out in court.

* * *

C. F. BLANKE CO. ACCUSED.

An information was filed against the C. F. Blanke Tea & Coffee Co., of St. Louis, Mo., in the United States District Court on March 6, charging that the company placed excessive amounts of sand and clay in packages of ground black pepper, which it put on the market under its guarantee of strict purity. The information, prepared by the district attorney, contained eight counts, specifying different customers to whom it is alleged that the adulterated and misbranded packages were sent out.

C. F. Blanke, president of the company, said the company tried to observe the pure food law strictly, and to sell only pure pepper. The company is a large importer, and sometimes, Blanke said, a bag of unground pepper comes in which is not up to the standard. If any such pepper was sold by the company, he said, it was due to a mistake, which the company will rectify.

The company pleaded guilty in 1909 to misbranding packages of coffee. The minimum punishment, for a second offense, is a fine of \$300 on each count and for a third offense, imprisonment is the penalty.

RUNYON RESIGNS.

F. S. Runyon, chief clerk to Harry L. Eskew, pure food and drugs commissioner, has tendered his resignation to Mr. Eskew and it has been accepted.

Mr. Runyon has been one of the most efficient deputies that ever worked in the office. In addition to his splendid office work and his compiling of reports he has been a terror to the bootleggers of the state, and especially in Nashville has been cordially feared and hated by liquor dispensers.

* * *

EXCLUDE DUTCH MEAT PRODUCTS.

The Federal Bureau of Animal Industry, having regulation of import meat inspection, has issued a notice excluding meat and meat food products from the Netherlands from the United States markets. The reason given is that no adequate system of meat inspection is maintained in Holland. The notice reads:

"The bureau is officially informed that no adequate national system of meat inspection is maintained in Holland. Therefore, as provided by Regulation 27 of B. A. I., Order 211, no meat or meat food product originating in that country shall be admitted into the United States. Inspectors in charge will promptly inform prospective importers accordingly."

* * *

JAIL FOR THE VINEGAR MAN.

When is "pure apple cider vinegar" not pure apple cider vinegar? Answer: When it is made of diluted acetic acid.

The correct answer to this question caused Federal Judge A. B. Anderson to fine Earl Chandler \$500 and sentence him to the house of correction for six months at Chicago on March 4.

Chandler, who has been doing business under the name of B. T. Chandler & Co., confessed that a product which he had manufactured and sold under the name, "Pure Apple Cider Vinegar," never saw an apple, but was merely diluted acetic acid.

When Assistant District Attorney Frederick Dickinson said that Chandler had been fined several times in the state and federal courts for similar offenses, Judge Anderson imposed a jail sentence. This is the first jail sentence ever imposed for this type of offense against the pure food and drug law in Chicago.

* * *

LAUDABLE PRECEDENT IN EGG CASE.

The trial of Armour & Co., together with a broker and a wholesale egg dealer of Chicago, on an indictment for conspiracy to violate the pure food law under Section 37 of the Federal Criminal Code, resulted, recently, in a complete victory for Armour & Co.

A quantity of eggs unfit for food, but which were regularly sold for use in the tanning industry and which had been sold by Armour & Co., were found in the possession of baking firms at Detroit. The Government proceeded on the theory that the packing concern was responsible for the final resting place of the shipment and proceeded against Armour & Co.

On the trial, the Government's evidence showed that Armour & Company did not make the interstate shipment, and had nothing to do with the sale of the eggs to bakers; that it sold a commercial article through a broker to a jobber in such products in the usual commercial manner without any misrepresentation.

Judge Humphreys held that the facts clearly failed to show any conspiracy or even a violation of the food law on the part of Armour & Company and that it would be a monstrous doctrine to hold that a seller of a commercial article could be held liable for a severe penalty because the purchaser of the article used the same for improper purposes. He also stated that he hoped the time would never come in the administration of American law when a defendant could be held guilty of a crime and subjected to a severe penalty on such flimsy evidence as the Government produced, which amounted to nothing more than mere suspicion.

No evidence was offered on the part of the defendants.

COTTONSEED FLOUR FOR BREAD.

The Kentucky Agricultural Experiment Station, under the direction of Food Commissioner R. M. Allen, has been making experiments with bread, covering a wide variety of ingredients and other factors concerned in practical commercial baking. Many types and mixtures of flour were used, yeasts plain and reinforced, wrappings for bread were tested and a series of experiments undertaken with a view to ascertaining the value of cottonseed flour as a mixture for wheat flours. The general conclusions on the latter suggestion indicate promising possibilities for cheaper flour in the future.

To quote from the report just issued by Commissioner Allen:

"Cottonseed flour contains no starch, about 50 per cent protein and 10 per cent fat; while wheat flour contains about 70 per cent starch, 10 per cent protein and 1 per cent fat. From these approximate analyses it is readily deduced that by judicious mixing of the two flours we may get a mixture that will approach a balanced ration in itself. By varying the protein content of the mixture, a bread can be made for one whose nitrogen consumption is small or for the day laborer whose nitrogen intake is very large.

"The average digestibility of the different elements in cottonseed flour compares favorably with that of other food-stuffs. Altogether it seems that cottonseed flour as a food product has large possibilities. In the actual baking of cottonseed flour with wheat flour, not more than a 20 per cent mixture has been successful. The protein of cottonseed flour has properties different from the gluten of wheat flour, the chief one of these being that it is not at all elastic.

"A series of bakes with cottonseed flour produced the following results: Cottonseed flour stimulated fermentation. It caused decrease in loaf volume by weakening or diluting the gluten of the wheat flour. When more than 75 gms. of cottonseed flour is added the gluten is so weakened that sufficient rise for baking cannot be secured. The color resembles that of ginger bread when as much as 20 per cent of cottonseed flour is added. The loaf has a rich, nutty flavor that is highly pleasing, and it is the opinion of those who have tried it that the flavor is an improvement over the straight wheat flour."

In the matter of bread wrapping, the expectation was that something might be learned as to the effects of wrapping on the quality of the loaf. Ten uniform loaves of bread were baked, three wrapped in paraffine paper, three unwrapped and three in porous paper and the standard loaves were tested immediately after cooling. Analyses were run on one loaf of each series, 24, 45 and 69 hours respectively after wrapping. Conclusions: "The chemical change is slight or none at all for the different substances in the loaf for a limited time, so more can be deducted from the physical appearance, taste, odor, etc. The paraffine paper causes bread to retain all its moisture, which becomes equally distributed even into the crust, destroys its stiffness and renders it less desirable for use. From bread wrapped in porous paper, one secures all sanitary benefits without injury to the loaf. Unwrapped bread is insanitary if exposed and is liable to the growth of mold. Wrapping in porous paper seems to be the most desirable method."

* * *

SPRECKLES SETTLES U. S. SUIT.

Announcement was made on March 8 of the settlement of the Government's claim against the Federal Sugar Refining Company for unpaid duties from 1902 to 1909 inclusive by the payment of \$67,173. The suit against the company has been discontinued.

W. Cleveland Runyon, special assistant to the attorney general of the United States, gave out the following statement:

The claim in the Government's case against the Federal Sugar Refining Company for unpaid duties from 1902 to 1909 inclusive has been compromised for the sum of \$67,173.22, which sum was offered by the Federal Sugar Refining Company. This compromise was effected on a basis not involving fraud, and, therefore, the Gov-

ernment's action, which charged fraud, has been dismissed. The Government accepted the offer made by the Federal Sugar Refining Company on these terms.

Both Mr. Runyon and Henry A. Wise, attorney for the Federal Sugar Refining Company, declined to discuss the settlement.

The Government's suit against the Federal Sugar Refining Company was started on November 20, 1912. The papers filed in the United States District Court show that the Government sought to recover \$119,080 in back duties. In this action the Government alleged fraud—in fact, the suit, calling for the reliquidation of custom house entries more than a year old, as it did, had to allege fraud, for without such an allegation the Government could not under the law reliquidate the entries.

Claus A. Spreckles, president of the company, fought the action. He insisted that his company was not guilty of any fraudulent action. Counsel representing the Government repeatedly urged a settlement, but Mr. Spreckles refused to agree to any compromise unless the Government withdrew its claim that there had been fraud. Mr. Spreckles frankly declared that there might have been inaccuracies in weighing, as a result of which the Government did not collect all the customs duties it was entitled to, but he emphatically asserted that his company had not been guilty of any fraudulent practices. At first Government counsel declined to withdraw the allegation of fraud, and while he persisted in this attitude Mr. Spreckles was willing to fight the case in the courts, irrespective of the cost. When, finally, Mr. Runyon consented to adjust the claim on a basis not involving fraud Mr. Spreckles readily consented.

The president of the sugar company felt that if the Government had been deprived of duties by reason of the faulty system of weighing, which has since been improved by the installation of electric scales, it was no more than right that the company should adjust the claims, which has now been done.

* * *

MARKET NEWS SERVICE BEGINS.

Field men of the Office of Markets and Rural Organization have left Washington to inaugurate the Department of Agriculture's Market News Service for perishable crops this year. Branch offices have been established in New York, Boston, Philadelphia, Buffalo, Pittsburgh, Chicago, St. Louis, Minneapolis and Kansas City, to collect and distribute information in regard to marketing conditions. Other men are stationed in the producing sections in Florida, Louisiana and Texas, where onions, tomatoes and strawberries are already being shipped in carload lots to the big markets.

By collecting in this way information concerning conditions in producing districts and marketing centers, the Market News Service of the Department of Agriculture is designed to aid both shippers of and dealers in perishable crops. The information collected is sent out free by telegraph to all those who are sufficiently interested to pay the telegraph charges and by mail to those who do not care to incur this expense, but have a good reason for wishing the reports. Each of the field men in the marketing and producing centers acts as a distributor of this information and, in addition, it is sent out direct from Washington.

The first reports for this season are to be sent out on Monday, March 27. These will deal with carload shipments, receipts and general conditions for the onion, tomato, and strawberry crops. Other crops will follow as the season advances, the service being designed to include a total of 16 altogether. In the opinion of marketing specialists this work, which was begun last year, has already demonstrated its value in preventing the glutting of markets, in securing more profitable distribution for perishable crops, and in avoiding delay and waste through unnecessary diversions of carload shipments en route.

Although there were an unusual number of forest fires on the national forests of Oregon and Washington this year, the loss of merchantable timber has been relatively small.

Some Reasons Why Bankruptcy Law Should Be Repealed — Views of Oscar B. McGlasson, Ex-President of National Wholesale Grocers.

MUCH has been said of late and considerable thought has been given to the Bankruptcy Law. Business is rapidly awakening to the harassing commercial brigandage which the Bankruptcy Act legalizes and encourages and a great many of our foremost bankers, manufacturers and merchants believe that the proper course for relief lies in the abolishment of this law, rather than the further attempted amendments.

A review of the history of bankruptcy legislation might be of interest to your many readers.

The first act on bankruptcies was passed in 1800, which by its terms was to continue in force for five years and "from thence to the end of the next session of Congress, thereafter, and no longer." It was repealed, however, on December 19th, 1803.

The act of 1867 continued in force until 1878. Despite the various attempts made by the friends of this law to make it practical by several amendments it proved unsuccessful and was repealed.

All of our bankruptcy laws followed panics and were primarily intended to afford temporary relief solely, and as Senator Albert B. Cummins states: "As a method of distributing the assets of an insolvent estate, the Bankruptcy Law always was and always will be a complete failure."

Why so, one may ask? Because an attempt to govern down to date business, by a law fundamentally wrong in its application to present-day affairs (inasmuch as the law was passed solely to give temporary relief from a period of financial depression through which the country had just passed) is extremely unwise.

We now have adequate banking legislation, the Federal Reserve Act, which insures against further panics, and business should unite to wipe this costly and now iniquitous law off the statute books.

It is also quite clear that further amendments would not solve the problem, as one can readily appreciate the hopeless task it would be to attempt to patch up a seine to make a whole piece of cloth. Have the three amendments already made to this act brought to it the semblance of efficiency and have they made it any harder for the cheat and fraud to ply their trade devastating the resources of our country's commerce with the consequent great loss which business must absorb each year?

A glance at the report of attorney general of the United States is sufficient to show the impracticability of such procedure and the continuance of the Bankruptcy law. In 1914 the liabilities cleared through the bankruptcy court totaled \$244,721,826.29 and for 1915 they amounted to \$245,055,004.22, or the staggering sum of five hundred million dollars for two years, of which there was returned to unsecured creditors but slightly more than 7 per cent. Startling as it may seem these are facts and the figures may be verified by reference to the official government report.

When carbon accumulates in the cylinders of a motor your engine suffers a loss of power and you remove the cause. So should this commercial carbon be removed from the great business engine of our country ere the time arrives when the deposit becomes too great for progress.

That we have permitted the continuance of this now obsolete law for eighteen years is one of our biggest mistakes.

The theory that the Bankruptcy Law "promotes harmonious adjustments, yields a like return to all creditors and does away with the chaotic (?) condition that preceded its adoption, tending to uniform legislation," is advanced by the adherents of the law. The foregoing quotation is the sum total of all arguments in favor of the retention of this law on our statutes, though may be clothed or expressed in different words.

The fallaciousness of each contention may be very clearly shown:

First: These "harmonious adjustments" are simply the getting together of creditors to keep debtors OUT OF BANKRUPTCY because it is realized full well what the results will be if the debtor takes this easy road to liquidation of his debts. The various credit bureaus maintained by the Credit Men's Association are cognizant of the rapacious maw of the bankruptcy system and know how little chance the assets of a debtor have through settlement of claims via this route. There is no reason for adding to debtors temptations by the continuance of the Bankruptcy Law; all commercial laws favor the debtor and there is no necessity for contributing further to the burden. Were it not for this alluring bankruptcy loophole held out by the Government there would be a consequent increase in returns to creditors.

Second: The "like returns" upon which so much stress is placed is theoretically fine-sounding, but confronted with the unassailable proof of the infinitesimal dividends shows same to be unsound. We business men demand more than the meager 7 per cent which the advocates of this law seem to be satisfied with and are trying to perpetuate. In view of the net results and the average return of 7 per cent to creditors, something is radically wrong. Even this much-vaunted feature crumbles when confronted with the facts and figures as given in the attorney general's report. It takes a large charge of an insolvent estate to grease the cumbersome machinery of the bankruptcy court with its many attaches, who all get theirs out of what is yours.

Third: Defense of the law on the ground of "uniform legislation" claiming that the repeal of the act would result in "chaotic conditions" is likewise erroneous. What is "uniform" in the handling of accounts under our bankruptcy act other than the method of distributing and doling out the assets? The exemptions and homestead laws of the various states control; also chattel mortgages and lien laws. In some states a bankrupt may own a homestead worth a hundred thousand dollars, own personal property worth thousands and claim all exempt under the laws of the state. In other states chattel mortgages may be taken upon an entire stock of goods and withheld from record and upon the failure of the merchant the mortgage is held to be good, with the result that the entire estate is consumed in the payment of the indebtedness secured by such mortgage and the mercantile creditors stuck. Local statutes prevail and take precedence in all states and the only certain uniformity is in the costly method of distributing the assets.

It is hard to understand why a business man should want to make it easy for his debtors to escape paying their just obligations and favor the continuance of a law that makes such procedure possible, lowers the standard of business morality and places a premium on dishonesty.



Food News from the East



NEW YORK, March 31.—Nothing has quite stirred canning circles and food contractors as has the British beef stew contract. For almost a month, now, it has had every big food factor on tenter-hooks of uncertainty and, by reflection, most of the smaller fry; because till things were fairly well settled as to the big matter, prices and problems of supply and demand were all up in the air.

The big beef stew order, contemplated no less than 600,000,000 cans of individual pound-size beef stew rations for the British army, running into the prodigious sum of about \$91,000,000 and promising to keep every big cannery in the country busy at least a year and probably till the end of the war. It was an order supposed to emanate, by some indirect method, from the British army commissary, through the Bank of Montreal and thence through a new canning corporation known as the Imperial Canneries, Limited, but in the carrying out it meant the employment of scores of American canneries.

If American food producers had not become "gun-shy" of fat war contracts there would have been no uncertainty about it, but ever since the war broke out there have been innumerable big contracts floating about, some signed and some in prospect, which have turned out empty for various reasons. It is even suggested that some of the transactions are liable to pan out lawsuits and there are even whisperings of questionable practices in their origin. And so the reports of this big Canadian contract had canners guessing and all impending hopes have been predicated on the deposit in Montreal of the necessary credit to back up the big food order. At this writing, all the preliminaries have not been complied with, but just what has been done is still a mystery.

As to details of things that have happened in the contract field there is no doubt. Canners have made all their arrangements and have their contracts ready to file, suitably bonded, and as soon as the cash is deposited there will be hot times in the canning industry.

The Imperial Canneries, Limited, is frankly a holding company, supposed to comprise Gunn's, Ltd., of Canada, Burnham & Morrill of Portland, Me., J. T. Polk of Greenwood, Ind., and the Colonial Packing Co. of Philadelphia. These, it is understood will hold the main contract, but each will subdivide with smaller packers, and these in turn with certain material and supply houses. The latest information is that 15 sub-contracts have been awarded already, as follows, representing about \$71,000,000:

Name of Participating Co.	Approximate Values.		
	Total No. of Deliveries at \$1.75.	1-lb. cans.	per week. per dozen.
Atlanta Can'g Co., Atlanta, N. Y.	7,800,000	150,000	\$ 1,124,000
Acme Pack'g Co., Chicago..	25,000,000	500,000	3,645,000
*Burnham & Morrill Co., Portland, Me.	37,500,000	750,000	5,468,000
Burt Olney Canning Co., Oneida, N. Y.....	20,000,000	400,000	2,916,000
Libby, McNeil & Libby, Chicago.	50,000,000	1,000,000	7,291,000
Sears & Nichols Co., Chillicothe, Ohio	17,500,000	350,000	2,552,000
*J. T. Polk Co., Indianapolis.	50,000,000	1,000,000	7,291,000
Columbia Conserve Co., Indianapolis	10,800,000	200,000	1,458,000
Wabash Can'g Co., Wabash, Ind.	7,500,000	150,000	1,093,000
*Colonial Packing Co., Philadelphia	125,000,000	2,500,000	18,228,000
Delgado Mfg. Co., Dallas, Texas	50,000,000	1,000,000	7,291,000
Nelson Morris Co., Chicago	25,000,000	500,000	3,645,000

*Imperial Canners, Ltd., Toronto	27,500,000	550,000	4,010,000
Rider Pack'g Co., Crothersville, Ind.	12,500,000	250,000	1,822,000
*Gunn's Limited, Toronto..	25,000,000	500,000	3,645,000

Totals as thus far awarded to principals, for sub-division among their canneries, and to other sub-contracting packing and canning companies in the United States and Canada.490,300,000 9,800,000 \$71,479,000

The largest single parcel of the total order taken thus far calls for weekly deliveries of 2,500,000 cans, or 125,000,000 cans during the next twelve months. It has been awarded to the Colonial Packing Company, of Philadelphia, Pa. This company is one of the five participating corporations which signed the master contract with the British Government and it will divide approximately \$18,228,000 worth of the business between canneries in which its officers and directors are interested, located in Pennsylvania and the great canning districts around Baltimore, Md.

Libby, McNeil & Libby, of Chicago; the J. T. Polk Company, of Indianapolis; the Delgado Manufacturing Company, of Dallas, Tex., and Burnham & Morrill Company, of Portland, Me., have taken the next greatest shares of the beef stew contract.

The price at which the sub-contracts are being placed of \$1.75 per dozen one-pound cans, includes the canning and delivery at Montreal. The cans are to be packed in cases of 48 cans. It has been agreed that the sub-contractors are to receive the necessary beef supplies from a group of Chicago and other packers in Canada at their respective plants. Sulzberger & Co., control of which recently passed into the hands of a group of New York and Chicago financial interests, Swift & Co., and Armour & Co., are to supply the required 300,000,000 pounds of beef to fill the entire order.

Eighty per cent of the can business, the value of which cannot be definitely learned, is to be divided among subsidiaries of the American Can Company, the remaining 20 per cent going to the Wheeling Can Company, of Wheeling, W. Va. The can companies are to ship the cans as rapidly as possible to the respective canning companies who have received shares in the business.

The London Guarantee & Accident Company, Ltd., of London, England, is the surety on the bond for the master contract of \$91,000,000, made out to the Imperial Canneries, Ltd., of Montreal, Canada, and running to the British Government. Just what provision has been agreed upon between the contracting principals for the establishment of an irrevocable credit equal to the total contract price, by the British Government, could not be learned.

Well, there's the whole story and apparently it is all right—IF. The "if" is that it is all contingent on the originator of the master contract actually setting up a credit and everyone is guessing just how dependable it all is, though there are those who usually make safe leaders, who insist that it is a bona fide order.

*Parties to the master contract. Their shares to be divided among more than forty other canning companies, names of which are not yet known.

THE FOOD STANDARD DECREE.

When Judge Anderson of the Federal court in Chicago, decided the Thompson & Taylor Spice Co. case, holding that arbitrary standards of food quality and purity were not a legal basis for maintaining a criminal prosecution he raised the very deuce with food folks in this section of the country. While some of the official standards are admittedly ridicu-

lous, there has been a common disposition to accept them because they gave a safe and sane basis for gauging practice. And this decision knocked the whole affair into a cocked hat.

There is a feeling in food circles that unless the Federal authorities secure further decisions, making the Court's ruling uniform throughout the country, it will upset fair competition between Eastern centers and Western, wherever they are rivals for trade. If Eastern grocers are to be held to standards and those of Chicago are not, it will cause no end of trouble.

The Philadelphia Importers' and Grocers' Exchange has already taken the matter up with the Department of Agriculture in an effort to hasten a decision but thus far nothing tangible has come of it. There is a feeling that the Chicago case should be appealed, in the hope of bringing it into the Supreme court for a determination on which all could rely.

FOOL DATING BILL.

For downright asininity, observers hereabout are disposed to accord the leather medal to Assemblyman Twomey of Brooklyn, for the canned goods bill he has introduced at Albany, requiring that all canned foods except condensed milk, must bear the date of packing on the label and, further, that at the end of two years all unsold canned foods must be returned to the packer, by whoever holds them for sale, for redemption. The penalty is \$50 for the retailer and \$500 for the wholesaler or packer.

It is unnecessary to go into all the details of the bill, but the chief point of objection lies in a clause reading:

"All goods affected by the provisions of this section unsold to the consumer at the end of two years from the date printed on the label thereof, shall be returned to the manufacturer or packer of such goods and he shall deliver new goods of equal quality and quantity in exchange for such returned goods.

"Goods imported from foreign countries of foreign manufacture shall not be subject to the provisions of this section.

"Any person violating any of the provisions of this section shall forfeit to the city, village or town where the violation occurs, the sum of fifty dollars, if a retail dealer, and the sum of five hundred dollars, if a wholesale dealer or packer."

Of course, the party who drew the bill knew little or nothing of canned goods, and the chief hope of the trade is that its very absurdity will kill it. For instance, everyone ought to know that canned goods once properly canned will remain perfectly good as long as the can is kept tight. Therefore the two-year suggestion is unnecessary, absurd and a source of nuisance and expense to the consumer. It would prevent any packer putting up in a season of plenty more than one season's supply and would force him to anticipate returned goods and add enough to his prices to cover any possible replacements.

As to the grocer, well, ask any grocer whether he has any 2-year-old canned goods on hand. Of course he has and they're just as good as the day they were packed. And as for canned milk, which is exempted, everyone knows that old milk will "lump-up" by long standing; about the only thing in the list that does change and that is merely a mechanical change and in no wise hurts the goods. The feeling in trade circles hereabouts is that there's a big job on hand for the fool killer at Albany.

NATIONAL WHOLESALERS' EXECUTIVE.

Though it does not make a lot of noise about its proceedings, the National Wholesale Grocers' Association is manifestly very busy. It came out in connection with the Spring meeting of the Executive Committee, held a few days ago at the Biltmore and attended by every member with two exceptions.

The session did little of definite outside importance, but most of the time was occupied in listening to the reports of committees.

At the opening day's session, Sol Westerfeld, chairman of the National Retailers' trade relation committee, was pres-

ent, with George Stadtlander, former president of the New York Retail Grocers' association and relations between retailers and wholesalers were discussed with unusual cordiality and frankness. Mr. Westerfeld joined with the Federal Trade committee of the wholesalers in relating the outcome of recent conferences with the Federal Trade Commission, with a view to determining exactly what are fair and unfair practices and what should regulate fair competition. The delegates reported that the first question which will be investigated by the Federal Trade Commission will be the fairness of premiums and trading stamps in trade.

The Committee on Cost accounting system reported much progress by working in harmony with the investigators of the Harvard School of Business Administration and it expects shortly to issue a tentative recommended system of accounting for use by both wholesalers and retailers, to the end that uniformity may be secured in practice and comparative data secured.

The Educational committee recommended a campaign of useful suggestions to retailers, to the end of making stores more inviting and sanitary; also with other valuable suggestions in the direction of promoting efficiency among grocers.

The Committee on Bankruptcy law repeal made a long report and Former President McGlasson strongly urged the association to work for a complete repeal of the old statute. It appeared in the discussion that not all the members agree with Mr. McGlasson as to complete repeal, preferring amendment to the law, and as there are many bills for both ends pending before Congress, the association took no stand on the matter at this time.

The Committee on Pure Food reported that, although there are only eleven state legislatures now in session, there are already as many bills affecting the food trades already introduced to equal the grist of last year when forty-three were sitting. The committee outlined its programme of operations, which indicates that it has plenty of work planned.

A supplementary report for the committee was made by the Metric System section and Fred R. Drake reported much encouragement in the direction of growing adoption of the system. He cited the report on the subject by the Department of Commerce and on his recommendation it was decided to send a copy of the report to every member of the Wholesale Grocer in the country.

The Committee on Uniform Tares reported that it had at last gotten the matter of selling wrapped meats by net weight before the Department of Agriculture for consideration and it outlined the recent hearing held in Washington. The Committee reported that after eight years of work it had secured a net weight basis for every food product save wrapped meats and if the present ruling in this direction is changed, as seems probable, it will be able to report 100 per cent accomplishment of the aim for which it was appointed.

The Membership Committee reported at great length, deploping the number of jobbers still outside the association and suggesting ways and means for bringing them in and adding their moral influence to the association. It proposed a plan for redistricting the country and increasing the committee so that each member of the committee shall have a small enough zone to permit personal solicitation of every jobber in the country.

The Committee on Postal Affairs reported progress with reference to one-cent letter postage and outlined its intentions for future work in this direction. The committee also covered the Parcels Post matter, expressing its opinion that if parcels post was made absolutely self sustaining, the trader would have no cause for complaint as to unfair governmental competition. It was decided to urge a revision of the law and regulations to the end of requiring that Parcels Post shall be made entirely self sustaining.

CANNERS WANT LONGER HOURS.

The canners of New York state, are again seeking legislation at Albany, looking toward exemption from the general labor laws of the state so far as it ties them down to the employment of women and children in factories only eight hours a day. As everyone knows, the canning industry has periods when it is impossible to get enough help in rural sec-

tions to take care of the ripening fruit and vegetables as fast as they come in and limited hours are quite out of the question. Yet, last year, when an effort for exemption was made, the sentimentalists, reformers and yellow papers made monkeys of the canners.

This year they have gone about it in a more diplomatic way and the State Industrial Commissioner James M. Lynch, has been before the joint legislative Committee on Labor Legislation, and the committee has agreed to incorporate in the proposed revision of the labor law a section, the effect of which will be to permit the canners to employ their women workers twelve hours a day for any number of days that the Industrial Commission sees fit to allow them to do so.

The new cannery clause in the proposed bill reads as follows:

"Notwithstanding the provisions of sub-division 3 of section 77 and the provisions of section 93-b of this chapter, a female eighteen years of age or upwards may be employed in canning or preserving perishable products in preserving and canning establishments between the 15th day of June and the 15th day of October in each year not more than six days or sixty hours in any one week, nor more than ten hours in any one day; and the Industrial Commission shall have power to adopt rules and regulations permitting the employment of women eighteen years of age and upwards on such work in such establishments between the dates aforesaid in each year for a limited number of days of not more than twelve hours in any one day, and not earlier than 6 o'clock a. m., nor later than 12 o'clock midnight on any day provided the said board shall find that such employment is required by the needs of such industry in emergencies and can be permitted without serious injury to the health of women so employed, and wages of one and a half times the usual rate is paid for all overtime in excess of ten hours per day.

THE CITY AS A COFFEE BUYER.

The anticipated trouble in the New York Coffee Exchange, over the temerity of the New York Central Purchasing Committee, in making up and operating its own coffee specification and basis for judging referred to in my last letter, did not prevent the city from going ahead, securing bids, grading samples and awarding a contract on its own basis. And thus far, the threatened upheaval has been only a grumble, while other cities—notably Philadelphia—are asking for copies of the New York specification, with a view to doing exactly what New York did. The following bids were received:

	Santos Bogota or Columbian No. 3.		
	288,800 pounds.	22,600 pounds.	31,000 pounds.
W. L. Mitchell .....	.....	.145	.135½
Joseph Seeman .....	.111	....	...
John Bellman .....	.1125	.1675	.155
J. Aron & Co., Inc.....	.1069	....	...
F. C. Russell .....	.1093	.1622	.146

TO HEAR VICTOR CASE AGAIN.

The victory of the Victor Talking Machine Co. over R. H. Macy & Co. and all other price cutters, won in the Federal Court of Appeals, recently, is assailed and still another attempt is to be made to nullify it at the hands of the U. S. Supreme Court. That supreme tribunal of the land has granted a petition of the Macy company to review the case in full, despite the fact that it has already passed on the price fixing rights of a patentee, and despite the fact that the Court of Appeals finding would be ordinarily final. In view of the somewhat interesting conflict of findings of the Supreme Court in the Mimeograph and Sanatogen cases, the Court in this case consented to open the whole matter on review of the latest decision.

Of course, no one can anticipate what the outcome will be but there is a general welcome of another "final" determination of the issue, especially in view of the fact that a number of changes have occurred in the personnel of the Supreme bench and because there has lately been evidence of a change of mind on the part of courts favorable to the right of a specialty maker to control his goods after first sale.

THE TRADING STAMP DECISION.

The decision of the Supreme Court that the Washington law taxing trading stamps out of existence is constitutional, gave very general satisfaction here to organized grocers, both wholesale and retail. It has long been recognized that trading stamps are an insidious poison, taking hold of the grocer quite innocently but fastening themselves on him like a mustard plaster and ultimately dragging many of the victims down to bankruptcy.

Now that the highest court has held that a state may legally tax such stamps to the prohibitive point, there is a rush to secure laws similar to the Washington law, in several of the Eastern states, notable movements having started in this state and in Pennsylvania. But one thing appears to have cropped out; viz., that it will play directly into the hands of the big mail order houses. They do not give stamps, but the actual premium and the nature of their business is such as to make it a Federal and not a state question. So there is also a movement to have Congress pass a substantially similar law to shut stamp and coupon goods out of interstate traffic.

NEW BUTTER EXCHANGE.

The movement in favor of the formation of a new butter and egg exchange here, in rivalry with the old established Mercantile Exchange, is proceeding steadily, but it has already accomplished the chief object for which it was started, viz.: to compel the Mercantile Exchange to come out of its shell and become a genuinely public body instead of a private coterie of operators.

It has leaked out that at a recent meeting of the Directors of the Mercantile Exchange the advisability of abandoning the "Jew-baiting" policy was informally discussed. Of course it could not be officially discussed because there has never been any tangible action or rule by which Jews were barred from the Exchange; only it has long been claimed and apparently with reason, that no Jews would be admitted, despite the fact that the trade is largely dominated by Jews and some of them men and firms highly esteemed.

At any rate, one Julius Sall, of Sall Brothers, a Jew of some prominence, who has already been twice turned down in his applications for membership in the exchange, was unanimously elected on the third application, this week, and it is commonly reported that 20 or 30 others prominent in the new exchange movement, have been approached "unofficially" and urged to renew their applications in the old exchange.

Despite this eleventh-hour weakening of the "conservatives," who have long controlled the Mercantile Exchange, the Committee of 24 of the new movement will go right ahead with their plans. They have chosen the name "New York Butter and Egg Exchange."

MOVEMENT FOR BETTER SARDINES.

In an effort to improve the quality of canned sardines that are put up by the Maine packers plans are being formulated to secure official inspection of the fish before they are placed in the cans. Behind the movement, which has been started by some of the largest canning interests in the state of Maine, is the influence of the Federal Government and the sanction of the National Canners' Association. If the present arrangements are carried out the inspectors will be appointed by the latter organization and will have the power to reject any fish that they consider unsuitable, for any reason whatever. These inspectors will try to standardize the quality of fish that are canned and will also make an attempt to secure more sanitary conditions in the East port canneries, where by far the largest part of the domestic canned sardines are prepared for the market.

It is recognized by the packers that the scheme proposed will entail a much higher cost of packing, but the operators feel sure that the added cost of production will be more than offset by the elimination of claims that have been paid in the past for stocks that have been rejected owing to poor quality and the money that has been lost in paying return freights on these supplies.

VERDICT IN TRADING STAMP CASE.

The publication of the full opinion of the Supreme Court of the United States in the so-called trading stamp cases has shown that the significance of the decision is quite as great as had been supposed and that the position taken by the court is likely to produce a decisive effect upon the policy with respect to trading stamps that can or will be adopted in the future by state legislatures. This is the important aspect of the situation, inasmuch as the legal status of the policy to be pursued by the legislatures is now definitely marked out by the terms of the court decision referred to.

There were some time ago in the state of Washington, where the case originated, nineteen concerns, that now figure as complainants in this case, which were engaged in various lines of retail trade and were in the habit of advertising in various ways. Included among such methods of advertising was the so-called premium system carried on substantially as follows: Stamps, tickets or coupons at the rate of one stamp for each cash purchase of a specified amount would be handed to the customer, and these stamps when presented for redemption to the concerns which had issued them, or to a third concern with which the original issuer of the stamps had made a contract to that effect, would be paid for in merchandise. Under this plan the value of each article on sale in the several stores was fixed both as to cash and as to stamps, and in some cases arrangements for the use of the premium advertising system, based on this trading stamp plan and running from one to five years, have been in operation. Under these conditions, nevertheless, the state of Washington passed a statute requiring that every person supplying any stamps or the like representatives of value, entitling the recipient to redeem the stamps in merchandise, should take out a license fixed at \$6,000 before continuing the use of this premium plan. The effect of this was immediately seen to be that of practically prohibiting the continued use of the premium system, while at the same time the effect of it upon those who had already issued unredeemed stamps would apparently be that of subjecting them to heavy losses in paying the license, or to serious inconvenience and breach of faith with the customers already in possession of the stamps. When this situation was represented to the lower court at Spokane a temporary restraining order was issued wherein the motions asserted on behalf of the Government of the state that state officers were exempted from proceedings in the Federal Court because the suit was against them as officers of the state to prevent the enforcement of the criminal laws of the state. Ultimately an appeal was taken to the Supreme Court of the United States. Several other cases raising like points have also come up from other courts and states.

The Supreme Court recognizes, in the new opinion, that the license fee fixed by the state of Washington is prohibitive, but it nevertheless holds that the legislation is to be upheld as an exercise of the police power of the state. Without any considerable discussion of the scope of the police power, reference is made to other decisions in which that subject has been considered to greater length, and then the court takes up the question whether the purpose for which the trading stamp system was instituted has any material bearing on the right to exercise this police power. Due note is taken of the fact that, by the complainants in the case, the trading stamp plan was referred to as advertising, discount giving or profit sharing. It is conceded that the plan may have partaken of all of these, and yet that the state would have had power to check it if desired. The real question in regard to the effects of the stamp plan, it is stated, "is not in their designations, but in their influence on the public welfare"—a "matter on which the judgment of the legislature must prevail, though it be controverted and opposed by arguments of strength." The mere fact that such restriction is alleged to be "sumptuary legislation" is not considered as a matter of fundamental importance since, "as to what extent legislation should interfere in affairs, political philosophers have disputed and always will dispute," the real point of such complaints being properly to be settled when specific instances arise with respect to the influence exerted by the premium

plan upon business activities which are shown to be desirable.

A disappointing aspect of this decision, and of others accompanying it, is found in the fact that it is careful for the most part in avoiding the expression of a definite opinion as to the beneficial or injurious character of the trading stamp system. There is, however, one phase of the Washington opinion which goes a little beyond others in taking a positive position on this subject. This is found at the point where the Supreme Court is considering what ends it is that the premium system is designed to serve. At that point it is noted that the system "does not terminate with the bringing together of seller and buyer, the profit of one and the desire of the other being satisfied, the article bought and its price being equivalents," but that "it has ulterior purposes," so that, it is contended, "there must therefore be something more in it than the giving of discount, something more than the mere laudation of wares;—the system—has features different from the ordinary transactions of trade, which have their impulse, as we have said, in immediate and indefinite desires having definite and measurable results. There may be in them at times reckless buying, but it is not systematized by the seller." Although intent to pass any moral judgment upon the system is disclaimed, it would appear from this and some other passages of like kind that the tone and attitude of the decision are distinctly adverse to the trading stamp idea.

MEAT IN HOT WEATHER.

A few simple precautions will aid the housewife in keeping meat untainted in hot weather. It is, of course, common knowledge that the higher the temperature, the quicker meat will spoil, but the family's supplies are not absolutely at the mercy of the thermometer. Ice and cleanliness are two great weapons of defense.

For many families a refrigerator is obviously out of the question, but it is perhaps better to have no refrigerator at all than a neglected one. Merely to wash it out occasionally does little good; it should be thoroughly scalded at frequent intervals, in particular the drain. This, if overlooked, is apt to harbor fungous growths, which may spread to the food. On one occasion a man applied to the Department of Agriculture because he had found that a joint of beef placed in his refrigerator had turned a peculiar bright red. Upon examination it was ascertained that the meat was covered with a peculiar fungous growth due entirely to the condition of the refrigerator. Growths of this kind do not always advertise themselves so prominently and there may be much evil in an ice box that the eye cannot detect.

If the refrigerator drain is not thoroughly cleaned, moreover, it is likely to become choked, the water is not carried off quickly enough and little pools are left standing in the interior. Dampness is one of the conditions most favorable to bacterial growth. An ice box in this state will not protect food long. It is, in fact, a wise precaution to wipe the interior of a refrigerator every day with a dry cloth.

The temperature of the average refrigerator is higher than most persons suppose, and in those households where a regular supply of ice is not obtainable, a cool cellar, a spring house or the depths of a well may serve somewhat the same purpose. On farms where there is an ice house, the meat may be placed in some form of closed retainer and buried in the ice. In any event, the meat must be carefully screened from flies. The danger from infection from these pests has been pointed out many times, but familiarity breeds contempt and they still persist. The fly not only does the meat itself no good, but it may readily deposit upon it some infection, which is carried in turn by the meat into the human system. Some flies will deposit their eggs on the meat and these in a short time will become maggots and the meat is "fly-blown."

Much sickness that is popularly ascribed to ptomaine poisoning or to bad food in general is really caused in some such way as this, the food, in itself perfectly wholesome, acting merely as a mechanical carrier for the "germs" which cause the trouble. Some of these sorts come from the human intestine and their presence is a sure indication that filth is present, even if the amount is too small to be seen. Filth of this kind may be carried by dust, but it more often comes from soiled hands. One might wish that every kitchen could have the sign found in some well-managed food factories:

"When you leave the room for any purpose, wash your hands before you return to work."

"Germs" which grow in foods and cause illness grow very rapidly, particularly if the food is a little warm, and are not destroyed unless the food is well cooked before serving. Simply "warming up" is not enough, as was found in a case of illness recently reported after eating some warmed up creamed vegetable. Certain kinds of food—creamed chicken, or custard, or warm vegetables, for example—are excellent culture mediums for bacteria which may have been introduced into them by accident. For this reason it is a safe rule to have as short a time as possible intervene between the preparation of food and its consumption. Broth is another excellent medium and in consequence should be drained off if it is intended to keep the meat for any length of time before serving. If the broth is used also, it should be boiled thoroughly first. All food, cooked or uncooked, should be kept in a clean, cool place in order to reduce the danger of infection to a minimum.

When meat must for any reason be kept for unusually long periods of time or when the conditions are unusually unfavorable, scalding may be resorted to advantageously. Dropping the meat into boiling water for a few minutes will not seriously affect its flavor when it ultimately appears upon the table, and it will put it in a much better condition for keeping. It is important, however, that it be dipped in a large body of boiling water. If only a small amount of water is used, the introduction of the meat will lower the temperature to such an extent that the whole process becomes worthless. With such meats as veal or pork, which are always—or ought to be—thoroughly done, the precaution can be carried further and the joints partially cooked before being stored away. Care should be taken, however, to see that the recooking is thoroughly done.

Hot weather also calls for additional precautions on the part of the housewife in regard to canned products. Once these have been opened and exposed to the air, they spoil as quickly—if not more quickly—than fresh food. The contents of a can should therefore be disposed of without delay. In no event should they be left in the can after it has been opened, but should be used at once unless the housekeeper wishes to "air" the canned material which some believe is desirable. If this is done, the can contents should be transferred to a clean earthen or glass dish and put away for an hour or two in a cool place where dust will not reach it.

NEW GRAPE PRODUCT.

The fruit juice specialists of the U. S. Department of Agriculture have recently developed a method by which the juice pressed from Concord and Ives grapes can be concentrated into a new form of grape sirup suitable for use in soft drinks and as an adjunct in cookery. The discovery of the process followed experiments in concentrating cider to one-fifth of its volume. The new method consists in freezing juice pressed from grapes into solid ice, cracking this ice into pieces the size of a walnut and whirling it in a centrifugal machine such as is used in separating the molasses from the sugar in sugar making. The rapid whirling of the grape-juice ice in the centrifugal machine causes the sugar or sirupy portion of the grape juice to separate from the crystallized water and to fly out into the receiving chamber of the centrifugal. By this method the grape juice is quickly reduced by the elimination of water to one-fourth its volume so that the sirupy content of a gallon of grape juice will make a quart of concentrated grape sirup. Experiments in making the product showed also that in the freezing and centrifugalizing a large part of the acid of the grape juice, which is in the form of cream of tartar, is left behind in crystals in the ice in the centrifugal basket. After the sirup has been concentrated it is sterilized by heating and can then be kept indefinitely. Aside from its special flavor the new grape concentrate, it is believed, possesses certain commercial advantages in that its reduced bulk makes it cheaper to store, handle and ship.

The concentrated sirup from the Concord grape is a rich purple product somewhat thicker than maple sirup. When it is mixed in the proportion of 1 part sirup to 2½ parts of water it makes a novel unfermented grape beverage with the flavor of the grape but with much less acidity than is characteristic of Concord grape juice, as commonly found in the market.

While the process has not yet been developed on a commercial scale, the experiments indicate that where a commercial ice plant is available the new product can be made at a cost which should be attractive to manufacturers in grape growing districts.

Experiments in making the concentrate with Ives grapes indicate that the new method removes practically all of the "rough" taste which sometimes affects grape juice made from this variety. The fact that the freezing process automatically removes much of the acid or cream of tartar from the grape juice will, it is expected, make this process especially valuable in off seasons when, because of weather conditions or the fact that the foliage of grape vines is deficient, the grapes fail to develop their normal sugar content. In such cases it is believed that the freezing process, by separating out the crude cream of tartar, with more or less coloring matter, will enable manufacturers to make a desirable sweet juice of black grapes which have a high acid content.

The grape sirup, moreover, the experimenters believe, will be of service as a sirup for ice cream sundaes and as a flavoring sirup in cookery, and will therefore be adapted to many dietary purposes. Endeavor will be made to interest manufacturers in the new food product and to test it during the coming season on a commercial scale.

SKIM MILK HAS FOOD VALUE.

Skim milk is a very economical food material and might well be more largely used as human food—this in spite of the fact that it is nine-tenths water. The argument for economy is based on the price at which it is usually sold and upon the composition of the remaining tenth, or the nutritive portion.

Whole milk, as everyone knows, is an indispensable food for the young, and even in the diet of the adult it is comparatively economical. The only nutrient taken from it in skimming is the butter fat. There is left, therefore, in the skim milk, not only all of the sugar, which amounts to about 4½ parts in every 100, and all of the mineral substances, but also all of the protein. The last-named substance is important because, besides serving as fuel for the body, as fats, sugars and starches do, it also supplies nitrogenous tissue-building material. The proportion of protein in skim milk, as well as of the mineral constituents, which are also valuable for body-building, is even greater than in whole milk.

Since the nutritive part of skim milk consists very largely of protein, it is to be classed, as whole milk is, with such food materials as eggs, meat, fish, poultry and cheese (though it is much more delicate than those foods), rather than with such substances as sugar, which serve only as fuel. Two and a half quarts of skim milk contain almost as much protein and yield about the same amount of energy as a pound of round beef. When skim milk sells for 4 cents a quart, or about 2 cents a pound, and round of beef for 20 cents a pound, a dime, or any other sum of money spent for skim milk will provide nearly twice as much nourishment as it will if spent for round steak. Round of beef, of course, is one of the lower-priced meats and when compared with the more expensive cuts, skim milk makes a still better showing from the standpoint of economy. The comparison with oysters is very significant: a quart of oysters contains less than twice as much nourishment as a quart of skim milk, and yet it often costs several times as much. Both are useful, wholesome foods, and in the oyster one has a special flavor. A combination of the two in oyster stew or creamed oysters is an economical way of using the oysters, since it makes a given quantity "go further."

Whole, unskimmed milk has, of course, a more pleasing taste to many people, and those who do not need to consider the additional cost will, no doubt, always prefer it. When used for cooking, however, the difference in taste between skimmed and unskimmed milk is not perceptible, and there are a great many uses to which skim milk can be put in the preparation of foods. In the making of cereal mushes, for instance, the use of skim milk in place of water adds greatly to the nutritive value, particularly by raising the amount of tissue-forming materials. In making milk soups,

chowders, custards and cakes also, it can be profitably used. In chowders the lack of fat is made up by the use of salt pork.

CORN CHOWDER.

- 1 can of corn or 1 pint of fresh corn, grated.
- 4 cups of potatoes, cut into small pieces.
- 2 ounces salt pork.
- 1 small onion, chopped.
- 4 cups of skim milk.
- 1 teaspoonful salt.
- 4 ounces crackers.

Cut the pork into small pieces and fry it with the onion until both are a delicate brown. Add the potatoes and corn; cover with water, and cook until the vegetables are soft. Add the milk and salt, and reheat. It is well to allow the crackers to soak in the milk while the potatoes and corn are being cooked. Some people cook the cobs from which the corn has been removed, in water, and later use this water for cooking the potatoes and corn.

CAKES WITHOUT FLOUR.

When cottage cheese is made from skim milk, cream or butter is very commonly added, to make it more palatable. For some purposes the cottage cheese curd from skim milk is better than that from the whole milk, as for example, in cakes made from the following recipe, which is unusual since it contains no flour:

CURD CUP CAKES.

- 1 cup dry curd.
- 4 eggs.
- $\frac{3}{4}$ cup sugar.
- $\frac{1}{8}$ teaspoon salt.

Beat the yolks of the eggs thoroughly; add the sugar and the curd (which must be very dry) and beat until the mixture is smooth. Combine this mixture, by cutting and folding, with the stiffly beaten whites of the eggs. Bake for 20 minutes in a moderate oven in which the heat is greater at the bottom. Use unbuttered gem tins. This amount should make about 30 cakes.

In order to prepare the curd, take $2\frac{1}{2}$ or 3 quarts of sour skim milk; heat to the boiling point, and strain; when no more liquid runs off, press the curd between cloths or spread it out in a thin layer on a cloth and dry it in a warming oven. If the curd from the quantity of milk given amounts to more than a cupful, it is too wet.

If a very sweet cake is liked, as is the case in parts of South America, where these cheese cakes are well known, two cups of sugar may be used with two cups of the cottage cheese and four eggs.

In recommending skim milk as food, the fact should always be kept in mind that it has gone through one more process in the course of its preparation for family use than whole milk has—that of separation or skimming. This, in the case of a food material so liable to become contaminated and to be the carrier of disease, is a very important matter, and the consumer should take even more pains than in buying whole milk, to know that it has been carefully handled, particularly if it is to be used raw.

The provisions of the Food and Drugs Act and common honesty require that skim milk should be sold for what it is and never as whole milk. It should be plainly labeled as skim milk. To sell it as whole milk would not only be a violation of the Federal Food and Drugs Act, in cases where that law applies, but also a violation of the State Law in any State where it might be sold.

STARCH SHORTAGE IN IRELAND.

Laundry starch is now costing \$6.81 per 112 pounds, this being an average figure for the average grade. The single starch factory at Cork is curtailing its deliveries, and the leading English starch firms are also unable to serve their customers promptly or at normal prices.

The use of laundry starch in the south of Ireland, while not as prevalent as in the United States, is considerable. The city of Cork has three laundries, while Queenstown, Buttevant, Youghal, and a number of other large towns have laundry establishments.

USEFULNESS OF THE PERSIMMON.

The only fruit, says a new publication of the United States Department of Agriculture, Farmers' Bulletin No. 685, which equals the persimmon in its value as a food is the date. Nevertheless many persons with fine persimmon trees in their possession are allowing the fruit to go to waste either through ignorance of the many uses to which it may be put or through prejudice. There is a saying in the persimmon country that persimmons are "good for dogs, hogs, and 'possums." This, however, is declared to be a gross injustice to a very valuable product.

One reason for the neglect of this fruit is the mistaken idea that persimmons are unfit to eat until they have been touched by frost. As a matter of fact much of the best fruit is lost each year because it ripens and falls to the ground where, not being touched by frost, it is left to rot. Such persimmons as are not edible before frost comes are a late variety of the fruit and the reason that they pucker the mouth is because they have not yet ripened. In general the best fruit are those that ripen just before the leaves fall.

At the present time the most common use for the fruit in the persimmon belt, which extends from Maryland, Virginia, and the Carolinas westward through Missouri and Arkansas, is as food for hogs. It can, however, be made up into a large number of very palatable products for human consumption. To be on the safe side it is well to add a half teaspoonful of baking soda to each cupful of persimmon pulp whenever the fruit is subjected to heat. This does away with all risk of astringency, the quality in unripe persimmons which produces the well known puckering of the mouth. If the fruit is perfectly ripe this precaution is not necessary, but as there is always the possibility of some green fruit finding its way into the pulp it is usually advisable.

The following recipes will be found simple and agreeable:

PERSIMMON BREAD.

1 cup of persimmon pulp, 1 cup of water, $\frac{1}{2}$ teaspoonful of soda, yeast, shortening, flour to make a stiff dough.

Set to rise, mold, and bake like other bread.

PERSIMMON CRUMPETS.

Take 1 pint of the sponge of persimmon bread which has been set over night, add one egg and enough milk to make a thin batter, set to rise for one hour, then bake on a hot griddle like griddlecakes. Serve hot with butter or sirup.

PERSIMMON GRIDDLECAKES.

1 cup of persimmon pulp, 1 egg, 1 cup of flour, 1 teaspoonful of baking powder, $\frac{1}{2}$ teaspoonful of soda, milk to make a thin batter.

Bake and serve as above.

PERSIMMON CAKE.

1 cup of persimmon pulp, $\frac{1}{2}$ cup of sugar, 1 egg, 1 cup of flour, 1 teaspoonful of baking powder, $\frac{1}{2}$ teaspoonful of soda.

Butter of size of a walnut. Bake 40 minutes in a moderate oven. For a soft pudding leave out the eggs. For a custard leave out the flour and the baking powder.

PRESERVED WHOLE PERSIMMONS.

Put a thin layer of sugar in the bottom of a jar; then a layer of whole ripe persimmons, then a layer of sugar; and so on until the jar is full. The sugar will soon dissolve and form a sirup. Press the upper fruits down under the sirup or add more sirup to the jars. Seal and store until used. The sirup may be drained off and the fruits served like dates, which they will resemble very much in both appearance and flavor.

PERSIMMON ICE CREAM.

2 cups of persimmon pulp, 1 cup of thick, sweet cream.

Beat together thoroughly and freeze like ordinary ice cream. The fruit must be thoroughly ripe and nonastringent.

PERSIMMON FUDGE.

2 cups of persimmon pulp, 2 cups of sugar.

Cook over a slow fire, stirring occasionally, until graining begins. Add 1 teaspoonful of baking soda and stir over the fire until quite stiff. Spread on buttered platter or paraffin paper.

Fishing Industry of U. S.—The Fisheries of This Country Each Year Show an Increased Aggregate Output with Increased Income to the Fishermen Dependent on Various Factors.

By H. M. SMITH,
Commissioner of Fisheries.

WHILE the flatfish operations in the fields operated from the Woods Hole station were greatly retarded by unfavorable weather, and fewer eggs were secured than in the previous year, the final results in the number of fry distributed were over twice as great. The installation of fyke nets for the capture of brood fish was not accomplished in southern Massachusetts until late in January, and there were times during the next two months when the nets could not be operated because of accumulations of ice. The severe weather also delayed the work and curtailed the egg collections on the Rhode Island and Connecticut shores. The eggs from all sources numbered 507,440,000 which produced 373,230,000 fry, a hatch of 73 per cent.

The efforts in connection with mackerel hatching at the Woods Hole station were confined to fields in the immediate vicinity; all available spawn was taken from local traps, and from the 6,521,000 eggs secured 2,510,000 fry were hatched and liberated in local waters.

Spawning operations at the various stations devoted to the propagation of the trouts were highly satisfactory. At the Wytheville, Va., station approximately 2,500,000 rainbow-trout eggs were secured, the largest number ever taken by the Bureau from the domesticated stock of a single station. Substantial gains were also made at the Manchester, Iowa, station in the output of this species, the eggs taken being fully a million in excess of those of the previous year. Collections of eggs from wild rainbow trout in fields contiguous to the Leadville, Colo., and Bozeman, Mont., stations were greatly curtailed by heavy storms and high water in the lakes and streams during the spawning season.

The work with rainbow trout on the Klamath River, Cal., was practically a failure, not because of any diminution in the numbers of brood fish, but because they spawned for the most part in the main river instead of ascending tributary streams where they would have been accessible for egg-taking purposes.

The cultivation of the brook trout in Colorado, which is the only State where extensive collections of eggs are made from wild stock, was conducted under unusually favorable weather conditions, and over 6,000,000 eggs of fine quality were secured. As in previous years, a large part of the brook-trout eggs handled at the Bureau's stations are purchased from dealers, this course having proved more economical in most cases than reliance upon collections from wild fish.

Preparations for the conduct of black-spotted trout work in the Yellowstone Park were taken up in June, but most of the eggs were collected in July. The weather conditions throughout the spawning season were unusually adverse. A succession of storms, very cold water, and high water in all the streams and lakes operated, resulted in a very short collecting period, and only 7,446,060 eggs were obtained, or only a little over one-fourth of the collections of the previous year.

The results of the operations at the various pond-culture stations during the year were in general satisfactory. While there was a slight falling off in the product of the black basses, considerable gains were made in the output of the sunfishes and other species. It is impossible, however, with the present facilities to produce the basses, crappies, sunfishes, and catfishes in sufficient numbers to meet the constantly increasing demands.

While the game fishes constitute a relatively small percentage of the Bureau's output, their cultivation is valuable as an incentive to private fish culture and for the maintenance

in public waters of the supply of fishes that may be taken by anglers. The construction of private ponds and the establishment of large fishing preserves are increasing each year, and the Bureau is relied upon to furnish brood stock for such waters.

The Bureau has continued the work of rescuing fishes from the temporary lakes and pools formed when the Mississippi River and tributaries subside after the annual freshets. Notwithstanding the gradual extension of the field of operations, the collections from this source have for some time been falling off and in places are appreciably smaller than they were a number of years ago. However, the work during 1914 was more favorable than for several seasons past, and 2,500,000 fish of all species were saved, this number being about three times the collections of the previous year. These fishes, which would inevitably have perished from drying or freezing of the ponds, were for the most part returned to the main streams; but the basses and allied species thus obtained are relied on to supplement the pond-cultural operations, and are utilized for stocking waters in the contiguous States and other parts of the country.

The important work inaugurated some years ago of rescuing from the Chesapeake & Ohio Canal various food and game fishes that become stranded when the water is drawn off in winter, was prosecuted in the portion of the canal between Point of Rocks, Md., and Shepherdstown, W. Va. Approximately 19,500 adult and fingerling large-mouth and small-mouth black bass, crappie, sunfish, white perch, yellow perch, and catfish were taken and transferred to adjacent portions of the Potomac River.

The hatching of pike perch at the Swanton, Vt., station, though considerably retarded by the late spring, was successful. The egg collections were above the average, amounting in round numbers to 134,000,000, and being of very fine quality. The losses during incubation were small. The most gratifying feature of the work, however, was the outcome of the experiment undertaken the preceding year of holding brood fish to ripen in pens constructed along the shores of Lake Champlain. All previous attempts in this direction had met with discouraging results, the green fish so held either dying before the eggs matured or, in case they survived, yielding eggs that were almost if not quite worthless. It may be stated, however, that such attempts were confined entirely to crates moored in the Missisquoi River, most of the brood fish for the Swanton station being taken in those waters rather than from the lake. Very soon after the disappearance of ice in the lake in the spring of 1914 a number of decidedly green fish were captured in seines and transferred directly to the pens. They matured rapidly, there was no noteworthy loss, and the eggs were equal in quality to those obtained from ripe fish captured in the river. Nearly 500 green females were thus matured, and more might have been ripened in this way had it not been deemed inadvisable, in view of the unsatisfactory results in the past, to conduct the experiment on too extensive a scale.

Experiments in the artificial propagation of the buffalo-fishes were continued at the Meredosia, Ill., station during the spring of 1914, but the results were almost negative. The low water prevailing in the Illinois River during the spawning season made it exceedingly difficult to secure brood fish, and only one ripe female was obtained; this yielded 300,000 eggs, from which 150,000 fry were hatched. As noted in former attempts to propagate the buffalo-fish, the fry after hatching seem unable to swim from the jars. However, by placing the fully developed eggs in shallow pans just prior to hatching, the

heavy losses from smothering which occur when the fry are held in jars with developing eggs were overcome. It is doubtful if any conspicuous results with the buffalo-fishes can be expected until special hatching facilities can be provided and water of a relatively high temperature insured.

The propagation of shad on the Willamette River near Oregon City, Oreg., has become an established feature of the fish-cultural operations on the west coast, but as yet is conducted on only a small scale. The run of shad in the Columbia River and tributary streams during the spring of 1914 was unusually large. On the Willamette River operations began May 27, and 4,062,000 eggs had been secured up to June 30, with the prospect that the season's output would exceed 6,000,000 fry.

Two interesting reciprocal transfers of aquatic creatures between the Atlantic and Pacific coasts have been in progress for several years, and are now being actively pushed in the belief that definite results of a highly practical value will ultimately, perhaps soon, be achieved.

The Atlantic's contribution to the Pacific is the lobster. In November, 1913, 4,007 adult lobsters, about evenly divided as to sex, were transferred from the Bureau's station at Boothbay Harbor, Me., to Seattle, Wash., in one of the standard refrigerator cars of the American Express Co., an attendant accompanying the shipment to give the lobsters proper care. On arriving at Seattle the lobsters were placed on a Puget Sound steamer and conveyed to the San Juan Islands, where they were distributed in excellent condition off Deer Harbor and Friday Harbor. The total losses in transit were only 440. It is felt that the annual planting of some thousands of adult lobsters in a given locality known to have the requisite physical conditions will result in the establishment of a flourishing colony from which offshoots will naturally spread both north and south, and finally cover an extensive coast line.

In continuation of the efforts to add to the fishery resources of the eastern seaboard by acclimatization of some of the more important food fishes of the Pacific coast, 13,240,000 eggs of the humpback salmon were transferred from Puget Sound, Wash., in October, 1913, for development at the Craig Brook and Green Lake, Me., stations, where special facilities had been provided for handling them. An abnormal loss of eggs and fry occurring at the former station was accounted for by the crowded condition of the hatching troughs; but taking into consideration the large numbers of eggs handled and the fact that they were transported more than 3,000 miles to be hatched, the results of the experiment are regarded as highly successful. The young planted during the fiscal year as fry and fingerlings numbered 7,199,000, and, in addition, 367,900 fingerlings remained on hand at the end of the year and were subsequently distributed. Among the rivers thus stocked are the Penobscot, Androscoggin, Damariscotta, Dennys, Pleasant, Union, Medomak, Georges, and St. Croix.

With the increased cost of living and the growing appreciation of the food value of fish, there is developing a widespread interest in pond culture, both in artificially constructed ponds and in natural inland waters of limited area. This kind of fish culture can be made to produce a ready and economical food supply for the home and to yield also a revenue in conjunction with farming. That such interest is attaining considerable proportions is evidenced by the fact that fully 75 per cent of the 10,502 applications for fish received by the Bureau of Fisheries during the fiscal year 1914 were for species suitable for stocking ponds and other small inland waters.

Much has been done by the Government for the preservation of the country's forests; large tracts of waste land have been reclaimed and made productive through the establishment of immense irrigation plants; water courses have been dammed for the generation of power; and gigantic strides have been made in agriculture and stock raising through the application of scientific methods. In the advancement of these projects, which have such an important bearing on the economic life of the country, the conservation of the fishery resources of the interior have been largely overlooked. Yet the farm lands of the Middle West and of the Eastern and Southern States embrace many thousands of acres unsuited to agriculture which might economically and profitably be converted into ponds for the cultivation of valuable food fishes. It is to this latter enterprise that the Bureau is giving special attention.

It is very common to see ponds, swamps, and small sheets of water lying entirely useless and marshy meadows producing nothing except a small quantity of inferior grass. With a small amount of labor and capital such places might be transformed into ponds which aside from their value for fish

culture would be of material benefit to farmers as reservoirs for the storage of water for irrigation during periods of protracted drought. Moreover, the utilization of waste lands in this manner would decrease to a measurable extent the liability of disastrous floods and tend to equalize the flow of neighboring streams.

In ponds so constructed, where the water temperature does not fall below 50° F. in the spawning season, the black basses, crappies, sunfishes, catfishes, and other species can be successfully cultivated with a comparatively small expenditure of time and money.

The Bureau has in many ways endeavored to encourage the raising of food fish on farms; and it will not only supply consignments of young fish for stocking ponds, but will gladly furnish such information as may be needed to insure the success of the undertaking.

If people desiring fish, either for stocking ponds or for public waters, will make the fact known to the Bureau, they will be supplied with blanks upon which to submit formal application, and at the proper distributing season a sufficient number of young fish for a brood stock, of a species adapted to the waters described, will be delivered free of charge at the applicant's railroad station. All that is asked in return is that the fish shall receive adequate attention and protection, and that the applicant submit a report from time to time as to the results of the undertaking.

Although the feasibility of breeding and raising terrapin under artificial conditions in inclosures has been demonstrated at the Beaufort, N. C., laboratory, experimental work has been continued for the improvement of methods of feeding, testing the possibility of developing a superior race for breeding, and for other purposes important to the commercial success of terrapin farming. It has been found that while the rapidity of growth can be stimulated by winter feeding and the prevention of hibernation, there is considerable individual variation in the rate of growth, and it is believed that by breeding from the more forward individuals there may be developed a culture strain which will reach a merchantable size at a considerable earlier age than the average in a state of nature.

The Bureau has furnished specimens of its young terrapin for experiment and observation in Florida, to determine whether the more valuable northern species will live and thrive under southern climatic conditions, and it has liberated several hundred yearlings and 3-year-olds in a circumscribed locality in Chesapeake Bay to test the feasibility of restocking depleted natural waters.

The results obtained at the Beaufort laboratory have been sufficiently promising to enlist private capital, and there is now established near there a commercial farm with a breeding stock of several thousand. Although these brood terrapin were brought together after the breeding season was well advanced, about 700 eggs were deposited and hatched. On the advice of the Bureau's terrapin culturist the young were fed during the winter on fresh food, and in consequence their growth has far exceeded that of the experimental broods fed on salt fish, although the mortality was somewhat higher, probably from overfeeding. The results to date are such as to confirm belief in the commercial profit of terrapin farming.

CANNED FOOD CONSUMPTION.

George W. Drake, secretary of the Western Cannery Association, has been analyzing the distribution of canned corn consumption through the year, with a view to ascertaining how available stocks can safely be adjusted to the season.

Mr. Drake distributes consumption of corn—and many think it just as applicable to tomatoes—as follows:

Consumption monthly—	per cent.	—Amount basis—	
		11,000,000	12,000,000
January	8	880,000	960,000
February	14	1,540,000	1,680,000
March	22	2,420,000	2,680,000
April	19	2,000,000	2,280,000
May	16	1,760,000	1,920,000
June	8	880,000	960,000
July	2	220,000	240,000
August	½	55,000	60,000
September	1½	165,000	180,000
October	2	220,000	240,000
November	3	330,000	360,000
December	4	440,000	480,000
		11,000,000	12,000,000



Consular Trade Notes and Brevities



ACCORDING to a report from the American Minister to Norway, dated Jan. 3, 1916, the Norwegian government on Dec. 17, 1915, authorized until further notice the free admission into Norway of tomato purée imported in containers weighing less than 5 kilos each. [Under the regulations formerly in force tomato purée imported in containers weighing less than 5 kilos was subject to a duty of 0.25 crown per kilo (\$0.03 per pound), while that packed in larger containers was exempt from duty.]

Sponges valued at \$264,054 were invoiced at the American consulate at Nassau, Bahamas, for shipment to the United States during 1915, compared with \$224,954 worth for 1914.

Consul General Alfred A. Winslow of Auckland, New Zealand, reports under date of December 22 that since July 1, 1915, there had been exported to the United Kingdom 242,000 cases of butter valued at \$4,136,525.

There were 4,307,700 bunches of bananas, valued at \$2,197,250, invoiced at the American consular agency at Bocas del Toro, Panama, for the United States during 1915, compared with 5,001,500 bunches, valued at \$2,560,350, for 1914.

The permission heretofore granted by the Italian government for the exportation of olive oil (which is among the products specified in the Italian embargo list) has been withdrawn and no more shipments will be allowed.

An inspection of the stock carried by many of the grocery and confectionery stores in Santiago de Cuba shows that a considerable amount of candy is imported from the United States. American candy is quite popular, and there is a market for all kinds of bulk and package goods, chocolates, crystallized candies, hard-boiled goods, mixed candies, stick candy, pan work and gumdrops.

A cargo of 6,000 cases, comprising approximately 200,000 cans of Californian fruits, is being unloaded at the Kings' Dock, Swansea, at the time of writing, after an all-water transit from San Francisco. In addition there are 100 cases of dried apricots being discharged from the same vessel. This large consignment is destined for the Swansea trade and for distribution in other parts of South Wales. The advantages of Swansea as a distributing point for such goods in South West Wales are due to geographical position, large wholesale distributing houses, a brisk demand, and understocked markets.

INCREASE IN PRODUCTS OF BEET-SUGAR.

The value of the annual production of the beet-sugar factories of the United States increased 30.1 per cent from 1909 to 1914, according to figures concerning the industry which have been compiled by the United States Bureau of the Census. A preliminary statement from the bureau gives the quantities of materials and the values of the different products manufactured in the two years that are compared.

Reports were received from 65 factories engaged in the manufacture of beet sugar, the majority of which reported for the season of 1913-14. The products for the year were valued at \$62,605,209. At the census of 1909 there were reported 65 factories, with products valued at \$48,122,383. The value of the annual production, therefore, has increased by \$14,482,826.

The 65 factories reported in 1914 used a total of 5,639,103 tons (of 2,240 pounds) of sugar beets, from which was produced 739,233 short tons (of 2,000 pounds) of granulated sugar, valued at \$58,351,323; 4,240 short tons of raw sugar, valued at \$239,142; and 26,461,291 gallons (of 12.2 pounds per gallon) of molasses, valued at \$1,536,192. In addition,

there were subsidiary or by-products valued at \$2,478,552.

Of the 65 factories reported in 1914, 15 were located in Michigan, 13 in Colorado, 12 in California, 7 in Utah, 4 in Idaho, 3 in Wisconsin, 2 in Nebraska, 3 in Ohio, and 1 each in Kansas, Montana, Illinois, Indiana, Iowa and Minnesota.

REDUCED CROP OF BRAZIL NUTS.

There are indications that the crop of Brazil nuts this year will be much smaller than that of last year, according to Folha do Norte of Para, Brazil. Consul Pickerell states that, while accurate information is not available, a communication from a merchant in the interior of the state to the paper mentioned contains the estimate that the crop will be less than one-half that of last year. This merchant continues:

"The merchants trading in this class of products are completely disappointed, because the effect of this small crop will be to upset the economic life of the municipalities of Obidos and Alemquer. From the notices we have received from the Rivers Curua and Trombetas, where the largest forests of Brazil nuts exist, a very small amount of nuts will be produced, due to the lack of rains during the months of March and April, the epoch in which the Brazil nut tree is in flower. It would seem that, notwithstanding the war, the small crop of Brazil nuts will fetch a high price."

CANADIAN LIVING COST INCREASING.

According to statistics published in the Labor Gazette by the Department of Labor of Canada, the cost of living has steadily increased in that country during the past year. The index number of wholesale prices, including 272 commodities, averaged 148.7 for the year, as compared with 136.1 for 1914.

The statistics show a considerable advance in the early part of the year in both foods and materials and a very steep advance in the last three months in materials, particularly metals and chemicals. In retail food prices the rise was not so steep as in the wholesale prices. The cost of a week's supply of 30 staple foods rose from \$7.97 to \$8.13. Flour and bread declined from the high levels reached early in the year, but prices for butter, cheese, and eggs continued high, while potatoes rose steeply in the last few months owing to a short crop. Coal and wood were slightly lower, and rent declined considerably in the western provinces.

SUGAR AND SIRUP WANTED IN NORWAY.

After the new year there should be good possibilities in the Stavanger district for the sale of American sugar. Until recently the attitude has been that sugar from the United States would command a prohibitive price, and as long as contracts were filled as usual from other sources there was no interest in the American article. Now, however, it has been found that contracts for 1915 can not be renewed for 1916 and it is a question of obtaining sugar at any price.

American sugar in general is of a quality much superior to that used here. It is also usually so much more expensive that it is not even considered by buyers, but the present seems to offer an opportunity for its introduction. American sirup has been more generally known here than sugar; in 1914 Stavanger imported 191,768 pounds from the United States. The same year 274,120 pounds came from Germany and 77,955 pounds from England. These other sources are now either uncertain or altogether closed, so that the American article should come into more general use.

No sugar sirup is made in Norway. The duty on sugar, liquid sugar, and grape and starch sirup is 0.30 crown per kilo (3.65 cents per pound). Ordinary sirup and molasses with less than 70 per cent sugar content are free. Stavanger buyers [whose names may be obtained from the Bureau of Foreign and Domestic Commerce or its district offices by

asking for file No. 70777] want samples of both sugar and sirup. Prices may be either c. i. f. or f. o. b. New York. English is generally used in correspondence.

MEXICAN PRODUCTION OF CHICLE.

During the calendar year 1915, 347,817 pounds of chicle, with an invoiced value of \$57,728 United States currency, were shipped from Tampico to New York. Most of the chicle shipped from this port is produced in the Tuxpam district.

Chicle is obtained by tapping the sapodilla (*Acras sapota*) trees, which grow wild in the forests of the state of Vera Cruz. The industry is controlled almost entirely by the Huasteca Indians, who sell the chicle in the markets of Tuxpam and Tampico.

From two to four trees are generally found on an area of one acre of average virgin forest land in the Tuxpam district. In certain sections in the states of Campeche and Yucatan the average is much higher. The trees should be from 12 to 15 years old before being tapped for the first time, and even then, unless great care is exercised by the tapper, they will die. It is said that the Indians, who use a machete, kill about 25 per cent of the trees they tap. The trees in this section will average from 1 pound to 1¾ pounds of commercial chicle at each tapping, but they should be tapped only once a year, the best time being the winter months.

Land containing sapodilla trees can be obtained in the vicinity of Tuxpam. Labor is high in this section on account of the development of the oil industry. At present, however, owing to the depreciated currency, good Mexican labor can be secured for 25 cents United States currency per day.

CONDENSED MILK IN BURMA.

During the year ended March 31, 1915, imports into Burma of condensed and preserved milk amounted to only 6,647,918 pounds, valued at \$636,190, as compared with 9,307,004 pounds, valued at \$802,880, in the preceding year. This large decrease was due to difficulty in obtaining supplies on account of the war. Imports from the United States declined from 44,801 pounds to 31,951 pounds. During the 12 months from Oct. 1, 1914, to Sept. 30, 1915, however, imports of milk from the United States amounted to 50,237 pounds.

During this period the total imports of condensed and preserved milk amounted to only 5,710,379 pounds, valued at \$613,290. The highest record was during the year ended March 31, 1914, when imports amounted to 9,307,004 pounds, valued at \$802,880. It is highly improbable that such large quantities will again be imported as long as the war lasts, with the resulting hard times.

GLACÉ FRUITS IN SOUTHERN ITALY.

The market price of glacé fruits in Naples at the close of November was given as 3.50 lire (\$0.67) per kilo (2.2 pounds) and there is a temporary export duty of 1 per cent ad valorem.

At present it is necessary in order to export glacé fruits to have the permission of the royal ministry at Rome, but it is understood that this permission is only withheld in the case of desire to export to countries at war with Italy.

Glacé fruit is prepared in the free zone to the east of the city of Naples, where the sugar necessary for its production is admitted free and the finished product eventually shipped to foreign parts at a consequently cheap figure. There is a duty on glacé fruit admitted from the free zone into the ports of Italy, but there is an absolute drawback on all the sugar used if the goods are finally exported from Italy.

It is understood that the price for all kinds of glacé fruits, cherries, peaches, citrons, etc., is the same, \$0.67 per kilo.

PEPPER TRADE OF INDIA.

The consular district of Madras comprises that portion of India extending from the Bombay Presidency, the central provinces, and Orissa, in Bengal, to Cape Comorin. Within the limits of the district are Madras Presidency, the native

states of Travancore, Cochin, Mysore and Hyderabad; the small chiefships of Pudukottai, Banganapalle and Sandur; and the small French possessions of Pondicherry, Karikal, Mahe and Yanaon. On the western coast of this region, generally described as South India, pepper is extensively cultivated. Malabar has, in fact, been considered, rightly or wrongly, the original home of the pepper of commerce. In Sir George Watt's "Commercial Products of India" the following is stated regarding pepper:

"*P. nigrum*, Linn.; the black and white pepper. A climber, usually dioecious, wild in the forests of Travancore and Malabar and cultivated in the hot, damp localities of southern India. Pepper was one of the most important articles of early Indo-European trade and has been extensively cultivated on the western coast of South India from very early times. Vincent (Periplus, etc., 1800, app. 42) speaks of it as grown in Malabar. It has accordingly been specially cultivated there since at least the fifth century. . . . Though cultivated from remote times in Sumatra, the Straits, Siam and the Malay Peninsula generally, Malabar has always been considered to produce the best pepper. The provinces where pepper is most extensively grown today are Madras and Bombay. Hanausek (Micro. Tech. Prod. [Winton and Barber, transl.], 1907, 374) states that pepper is adulterated with ground olive stones."

The consulate at Madras addressed a communication on the subject of cultural methods to export firms in southern India which ship pepper to the United States and to other countries. Numerous replies have been received, and one, which is typical of all, is quoted below:

"In reply to your letter of 4th ultimo regarding the gathering and preparing of Malabar pepper:

"The bulk of the crop is grown by small farmers owning only a few acres of land each. The berries are plucked by hand, dried in the sun, and trodden out to remove the stalks. The pepper is then picked over by hand to remove any sticks, stones, etc., that have become mixed with it. Malabar pepper undergoes no other preparation, except that occasional lots that have become mildewed through long storage are washed in cold fresh water and again dried in the sun. There are no by-products.

"Native merchants in the coast ports buy small lots of a few tons each from up-country dealers, who again send agents around the pepper-growing districts to buy up little lots of a few hundredweight each in the villages where they have been stored after purchase by small local merchants from neighboring growers, often in parcels of a mere bag or two. The crop is transported to the coast in various ways, according to the locality—carted over bad roads, boated down canals and backwaters, carried on bullocks, etc. The price of pepper on arrival at the coast is thus double (or more) the price paid to the original grower.

"The big native merchants at the coast ports consign part of their purchases to Bombay and other Indian ports by coasting steamers and native sailing craft. They also make contracts with European firms for forward delivery in the latter's godowns, in quantities of 5 to 100 tons, or even more, for each contract. The European merchants, on receiving deliveries, redry, regarble, bulk, and bag them for shipment to Europe, America and Australasia.

According to customhouse statistics the quantity of pepper exported from Madras Presidency to the Atlantic coast of the United States during the fiscal year ended March 31, 1914, was 2,306,528 pounds, valued at \$220,289, and to the Pacific coast 45,700 pounds, valued at \$3,441; for the fiscal year ended March 31, 1915, 5,280,856 pounds, valued at \$477,143, to the Atlantic coast, and 11,200 pounds, valued at \$1,200, to the Pacific coast. The total exports of pepper to all countries during these years were: 1913-14, 12,065,786 pounds, valued at \$1,198,023; 1914-15, 14,000,676 pounds, valued at \$1,278,852. In the latter year the exports of pepper to the United States, according to these statistics, were double the exports to any other country, Italy being the next largest purchaser with 2,719,220 pounds, valued at \$245,498, and the United Kingdom, 2,431,917 pounds, valued at \$222,327.

THE WHOLESALE GROCERY FIELD

ALL THE MANUFACTURING AND JOBBING NEWS WORTH PRINTING

CANNED FOODS MARKET.

By CANTICLE.

GENERAL—The market during March for canned foods has been disappointing to all canners and dealers. The proportion of weather permitting safe distribution has been very small during the month and for some reason the market has been otherwise stagnant, unusually so for the time of year. There has been an important recession in the price of the leading staple, canned tomatoes, and no advances to speak of except in an unimportant way in minor articles.

No one seems able to explain this exceptional condition. Nearly every other line of business is unusually active; dry goods, boots and shoes, hats, hardware, drugs, provisions and produce or green groceries all seem to be enjoying a great volume of business. Stocks and bonds and grain are also active. The bank clearings are remarkably heavy, money cheap, the factories all busy and all who want work employed, the car supply of the railroads is inadequate to transport the freight offering and altogether the business condition of the country is ideal, and yet canned foods are languishing, wholesale and retail dealers expressing no interest and refusing to buy futures. The business analysts in the canned foods line are mystified and confounded. No such situation, precisely similar, has ever been experienced by the canned foods trade and it is unexplainable. Whether it is overproduction or under-consumption, a permanent retrograde movement after a number of years of heavy distribution or whether the situation is entirely attributable to the apparent effort on the part of the wholesale and retail grocers to eliminate all speculative interest by entirely discontinuing the buying of futures is problematical.

Some hold that there is a concerted policy on the part of dealers against the custom of advance purchases of canned foods and yet many canners are reporting that they are all sold up to their capacity for the 1916 pack and spot canned foods are scarce in first hands.

Some claim that the dullness and drag in canned foods is being experienced only by the brokers and that wholesalers bought very heavy stocks last fall late and still have ample supplies. Their argument, however, is hardly tenable as there is little or no effort on the part of dealers to sell in a jobbing way.

It is known, of course, that there was an overproduction of canned peas, still the low prices are causing a heavy distribution of peas and the pack of tomatoes was very short and that of corn below a normal average.

CANNED TOMATOES.—There has been a recession in this article from the highest price and but little buying is progressing. Standard threes are quoted at 95 to 97½ f. o. b. Maryland, and at \$1.02½ to \$1.05 f. o. b. warehouses, Chicago. Twos are held at 80c each but can be bought in Chicago at 82½c from warehouse. Indiana has no tomatoes and is offering no spot goods.

Futures are quoted at 80c for standard threes and 60c for standard twos in Maryland and Virginia and at 85c for standard threes and 65c for standard twos in Indiana. Tens (No. 10) for future are without interest but are nominally quoted East at \$2.40.

CANNED CORN.—This article is dull and slow. Wholesalers have bought about all the futures they care to buy at present

and are standing pat for lower prices for futures. The spot market is without interest or important movement.

CANNED PEAS.—This article is selling well at low prices—very low prices. The buying of futures in canned peas is stagnant and canners are carrying over much of their best stock and selling futures against it.

THE GENERAL LINE.—Spinach is making a clean up and will not last until new packing is ready. Sweet potatoes are over-produced and are lower than at the beginning of the season. California fruits are dull and quiet for most kinds and apparently in over supply as in Hawaiian canned pineapple which is offering at prices unprecedentedly low. Salmon seems to be the strongest article in the canned foods line.

MEETING OF WESTERN CANNERS.—The annual meeting of the Western Canners' Association, the oldest organization of canners in the United States, assembled at Hotel Sherman, Chicago, March 23, 1916, and held a fine meeting. The annual election resulted as follows: Friend F. Wiley, Edinburg, Indiana, president; Walter J. Sears, Chillicothe, Ohio, vice-president, and George Drake of Circleville, Ohio, was re-elected secretary. There were about one hundred present at the meeting including Richard Dickinson, president of the National Canners' Association, and W. R. Roach and W. C. Leitsch, ex-president of the National Canners' Association, likewise many important men in the canning industry.

There was no formal program but questions of especial technical interest only to canners were freely discussed, and a fine luncheon spread at noon.

In the afternoon the question of promoting the use of canned foods arose and it was proposed that a Lecture Bureau should be established and managed by George Drake, secretary, and that invitations to lecture before schools, colleges, universities, women's clubs, medical conventions and societies and all kinds of meetings be sought and that local brokers and buyers near these institutions be conscripted as lecturers to respond to the invitations.

It was suggested that the education of the educators and the leaders of opinion was necessary and valuable and that much unthoughtful prejudice still existed among the better informed classes as to canned foods.

It was explained that such lectures could be held regularly, frequently and in fact constantly all throughout the United States and that thereby an organized constant educational system could be established at but little expense to anyone, for dealers and canners would cheerfully furnish samples with which to demonstrate such lectures and brokers, buyers and dealers would gladly do the lecturing free of charge.

There was an extended and interesting discussion of about all the advertising plans and methods now known to the experts, but the Lecture Bureau plan came forth from the debate free from riders or hobbles and is now in force and effect having been adopted by an almost unanimous vote. The strong effort of the Bureau will be to educate the rising generation in the universities, colleges, high schools, and grammar schools, where public opinion is largely established and prejudices destroyed. Communications addressed to George Drake, Secretary Western Canners' Association, Circleville, Ohio, in relation to lecturing and lectures will be promptly attended to.

DRIED FRUIT REPORT.

By VERITAS.

There is a noticeable improvement in the demand for all varieties of California Dried Fruit. Prunes and Apricots especially are very active. While this time of year is the best consuming period in the entire year, the demand is above normal. Prices on all varieties of dried fruit are on a very reasonable basis with the possible exception of Seedless Raisins; and, for that reason, they are going into consumption very freely.

APRICOTS.—Spot stocks of all grades of Cots on the Coast and in the Eastern market are closely concentrated. The market is very firm. High grade Moore-Parks and Blenheims, fancy and extra fancy, are in very light supply. There is every indication that they will clean up in the very near future. The reported damage to the coming crop of Apricots has also affected spot values. Reports indicate that the coming crop was seriously damaged by heavy, cold, continued rains. At the moment it is impossible to ascertain the exact extent of the damage; but, no doubt, the coming crop will be materially cut down because of the rain damage. Prices have not yet been named on future Apricots.

PRUNES.—Quotations on spot Prunes remain unchanged, although there is a much firmer feeling. Prices on future Prunes have advanced $\frac{1}{4}$ to $\frac{1}{2}$ c. There is no question but what the large percentage of the sales of future Prunes to date are short sales. The recent damage to the Santa Clara crop has strengthened short sellers' ideas, with the result of an advance in the market. The trade is not showing any particular interest in the purchase of futures at the moment, especially at the advanced prices. If the embargo remains in effect on shipments of Prunes and other dried fruits to England, it will, of course, affect values, but the general opinion among the packers in California seems to be that the embargo will be lifted. At any rate, there does not seem to be any consideration on their part of the embargo in their quotations. Quotations, they claim, are based entirely upon the crop prospects regardless of the embargo. If this is a fact, and the embargo is lifted, then, of course, the market will materially advance.

PEACHES.—This item is going into consumption fairly freely. It is a spring fruit and is always in good demand at this time of year. Prevailing prices are on a low basis and should stimulate consumption. So far, there have been no prices named on the coming crop.

RAISINS.—The situation remains unchanged. The Association's guarantee against decline on the present crop up until the first of the year, makes this item a safe buy. Seedless varieties are in very light supply. Thompson's Bleached and Unbleached are unobtainable in California. Stocks held by jobbers are extremely light. There is a fair holding of Seedless Muscatels, One Crown Floated and Seedless Sultanias in the hands of jobbers, but Coast supplies are practically exhausted.

CURRENTS.—The market in Greece continues to strengthen. The crop of last year is practically cleaned up with the exception of rain-damaged goods. Holdings in this country are below normal. The probabilities are that high values will continue until we get into the next crop.

MONTHLY SPICE LETTER.

The market continues exceedingly active. The consuming demand is large at present. There is a very firm tone; with an upward trend in most articles. Shipping conditions are as much unsettled as heretofore.

PEPPER.—Prices while generally unchanged are firm. The large consumption, however, is unabated. There is also a future export demand for all grades.

RED PEPPERS.—Exceedingly scarce and in sharp demand, especially the better grades.

CLOVES.—Unsettled, with slightly firmer tone. Prices are unchanged during the week.

PIMENTO (Allspice).—Very much higher on account of cables from both England and Jamaica. The market closed firm with upward tendencies.

MACE.—Quite scarce and in better demand at unchanged prices.

NUTMEGS.—In very steady demand at slightly firmer prices. Supply in sight is insufficient for American needs.

CASSIAS.—Saigon quiet to steady. Batavia very scarce and in better demand. China grades exceedingly scarce and in active demand.

GINGERS.—While unchanged are in fair demand. Prices steady.

TAPIOCAS.—Slowly tending upward, with good demand for all grades.

PAPRIKAS.—The consumption is steady. Prices unchanged. Hungarian continues out of stock.

SEEDS, HERBS, ETC.—The whole list is firmer, with upward trend. Turmeric is exceedingly active. Caraway and Poppy firm, with upward tendency. Celery slightly easier.

FISH MARKET REPORT.

The Lenten season is now in full swing and the fish business is good. On almost every item of salt fish, including mackerel, Yarmouth herring, split herring, etc., producers are virtually sold out. The smaller size mackerel, both domestic as well as Irish and Norwegian, are practically off the market. There is still left a fair quantity of No. 1 and No. 2 American Shore mackerel in first hands in the east. The following prices indicate what has happened to the price of mackerel during the last ten months. Ten months ago, No. 5 Norway mackerel could be bought at \$9.50 a barrel New York; No. 4's at \$14.00; No. 3's at \$17.00; No. 2's at \$19.00 and No. 1's at \$24.00. Today's prices are as follows: No. 5's \$21.00; No. 4's unprocurable; No. 3's unprocurable; No. 2's \$28.00 and No. 1's \$35.00. When one stops to think that there will be no further supplies of these small size mackerel until next October, it can readily be seen that it will be impossible to secure these sizes a little later from anybody.

Both medium and large split herring are now cleaned up in the east; the market prevailing in Chicago at the present time is from \$7.00 to \$7.50 per barrel, according to quality. This price applies to both sizes.

Yarmouth herring are now all cleaned up in England and New York and eastern importers control the market. Tens of thousands of these herring have been packed into small kegs that have been imported direct from Holland at some expense and are taking well with the trade wherever placed.

On the items of barrel salmon, both medium red and pink, the market is higher than it has been for some time. The new pack of barrel salmon will not arrive until October. In the meantime, limited quantities now on hand will not be sufficient to take care of the trade and prices on this commodity will certainly advance.

Lake fish at the present time is very firm and light receipts; this applies to all grades and qualities.

Smoked fish of all kinds is in fair receipt and light demand.

Norwegian canned fish is very high and will continue high, especially the better grades. Genuine bristligs of strictly summer pack high grade are now bringing \$12.00 a case in this market. The standard qualities are almost unprocurable at any price. There has been worked up quite a trade on native smoked sardines put up Norwegian style, and in the absence of not having the better grade goods from abroad are filling the bill.

Newfoundland gibbed herring are still selling well and have probably won for themselves a permanent place in the markets of the north and northwest. It has actually developed that the quality of these goods is superior to the genuine article that comes from Norway. As a matter of fact, an inferior Norwegian fish today would cost \$15.00 a barrel to import, while the domestic cured goods can still be bought as low as \$10.00 a barrel. The meat is very white in these fish and they are fat, contain melt and roe, and all in all, really surpass in food value the genuine Norwegian article.

D. H. LANE Co.

Menace of Chain Stores Much Over-Rated— Their Advantage Small—Only Three Percent of Food Supply Handled by Chains—Duty of Manu- facturers to Protect Equality of Opportunity for Distributors.

By THEODORE F. WHITMARSH,

President of National Wholesale Grocers' Association, before recent Convention of Tri-State Wholesale Grocers at Reading, Pa.

IT is very pleasing to me to address the Pennsylvania, New Jersey and Delaware Wholesale Grocers' Association, many of whose members have done so much to assist in the upbuilding of the National Association. In fact, our records show that Pennsylvania has the largest membership of any state in the National Association.

There is no state from which we obtain better or fuller co-operation than we do from Pennsylvania, and no other one state has contributed so much talent and rendered such important service in the conduct of the affairs of our association. I hope that the membership in the states that you represent will be 100 per cent by the time our annual meeting is held; one or two other states now enjoy this record.

I have recently been interested in looking over some letters received by our membership committee from wholesale grocers throughout the country who were asked to join our association to note the reasons they give for declining to do so. The feeling prevailed to a considerable extent that while our organization was of value to the larger wholesale grocer it was not of any particular value to the smaller man.

This impression is most erroneous. There is not a committee in our association with possibly one exception that is not obviously of as much advantage to the small wholesaler as to his larger neighbor. The one committee is the foreign trade relations committee. It is easy to take each of the other committees, analyze its work and show how it is of benefit to all wholesale grocers, regardless of size. The central idea may be illustrated in this way: The large metropolitan grocery jobbing house of John Smith & Co., let us say, located in Chicago, does business in a score or more of states, and like every house of its size, has its own house attorney, its own experts as to spices, coffees, canned goods, traffic questions, etc. Now, the smaller grocers throughout the country cannot afford to have in their exclusive employ experts in any considerable number of these branches, yet, by reason of membership in the National Wholesale Grocers' Association, they are receiving the benefit growing out of the ability and efforts of such men, because these men, even when not members of the various committees, are constantly advising them and giving them the benefit of their experience.

Furthermore, the association has, from its foundation, commanded the services of men of the greatest ability and experience in the wholesale grocery trade; men who have, without compensation, worked for the good of the entire membership.

The work of the national association can be divided under three heads, service, organization and education. Under the head of organization I would point out the fact that we keep in close and intelligent touch with all legislation in the forty-eight states, as well as in Congress, affecting wholesale grocers. The benefit derived by any one grocer is derived by every other, members or non-members. We do not seek for

special favors, and we make no efforts to put through legislation that will be of advantage to the wholesale grocer alone, but we do strive to have the laws in the various states bearing on food made clear and uniform, and I do not believe anyone entertains any serious doubt as to the necessity for such uniformity. Diversities in the laws seriously handicap the merchant, and the consumer, too, ultimately suffers from them. The time has passed when the country at large will tolerate railway tracks of different gauges in different parts of the country, and doubtless we shall some day see the importance of having our laws in various parts of the country made uniform.

There never was a time in the history of the wholesale grocery business when we were confronted with more changed or serious conditions than we are right now, and it will require most intelligent merchandising on the part of every jobber to conduct his business successfully and properly.

It is not so very long ago that the question of the necessity of the jobber was seriously agitated. Many seemed to think that his period of usefulness had passed, and that the natural channel of distribution was from the manufacturer to the consumer via the retailer. But all that has now changed; the agitation cleared the atmosphere, and the jobber is now regarded as an indispensable factor in business development.

When one problem passes, another comes to engage our attention. The question of the chain store rises to plague us, and according to some threatens to overwhelm and destroy the small grocers of the country. Those who have conjured up such distorted visions have been the victims of disordered mental states. Personally I entertain no fear of the chain store. I believe they are performing a useful service in putting the jobber and the retail grocer on the alert. I find no fault with them so long as they offer competition that is fair, but when we find a condition existing that has a tendency to give them an unfair advantage we believe the privilege to be ours to point out the truth, and do our part as American citizens to see that our country's laws against unfair competition, monopoly and discrimination are not violated.

The chain store has in many cases succeeded in inducing some manufacturers to believe that goods should be sold to them on the same basis at which they are sold to the jobbers, and use them as a bait in luring the customers of the small grocer into their stores, offering such goods at what is cost or less than cost to the small retailer and to his unquestioned injury.

To protect themselves against this competition, the retail grocers in some sections of the country have thought it wise to organize themselves into buying exchanges, that they might buy direct from manufacturers on the same favorable terms as do their larger neighbors, and the small grocer, outside of these exchanges, finds himself, be the jobber's margin ever so

small, apparently entering the race under an impossible handicap.

In some interesting figures given out recently, the annual food bill of the country was placed at four and one-half billion dollars, disbursed through the following channels:

\$1,698,000,000, or 37.9%, through the corner grocery stores.

900,000,000, or 20.0%, through the general stores.

1,000,000,000, or 22.0%, through the meat markets.

400,000,000, or 9.0%, through rural stores.

50,000,000, or 1.1%, through mail order houses.

150,000,000, or 3.3%, through chain stores,

and the balance, 6.7%, through various other sources.

These figures show that the chain stores handle a little more than 3% of the food distributed in the country in the course of the year, and allowing for 1.1% accounted for by the mail order houses, the balance, 95.6%, or \$1,300,000,000, represents the sales through other sources; and the question naturally arises in my mind why should any intelligent manufacturer, who wants to be fair to himself and his customers, make it possible for less than 5% of the distributing agents to discriminate against more than 95% who do not and who cannot buy direct. He is unquestionably aiding mightily in the building of a monopoly that not only violates his country's laws, but that will ultimately crush him.

Personally, I believe that the manufacturer should himself determine whether he wants to sell entirely through the retailer or entirely through the jobber. He should do one thing or the other and not both. Whatever may be their effect as now enforced, the purpose of our trade laws, state and national, is to foster the small, the weak, to protect the merchant with limited capital against extermination by his wealthy neighbor. Manifestly, the fair thing for the manufacturer to do is to sell all the retailers at the same price or let the jobbers handle all his goods so that all of the retailers may buy on an equal footing. The proud declaration of our forefathers, "that all men are created equal," must have a hollow, cynical ring for the struggling merchant who finds his native land permitting his big rival slowly, but inevitably, to squeeze the life out of him.

If I were a small grocer I should not fear the competition of any chain store. That which is founded on discrimination, or wrong of any kind, may work injury for years, but it cannot permanently prosper. Ultimate success must be built on fair dealing. I believe that we wholesale grocers in supporting the movement which is under way to educate the retail grocers and their assistants to be better merchants will do much in fitting them intelligently and successfully to meet the chain store monopoly problem.

I am hopeful that the National Wholesale Grocers' Association will soon hit upon some plan to successfully disseminate helpful information to the grocers of the country and their clerks, and incidentally make more efficient merchants of the wholesale grocers, for we have much to learn. I believe there is little doubt but that there will be unanimous agreement to the necessity of this educational feature of our work.

I believe the future holds great promise for the grocery trade. I believe that the period of prosperity through which we are now passing will not be of short duration. It is true that we are living in unusual times, and that no one can clearly foresee what conditions will be when hostilities have ceased; but one man's guess is as good as another's, and I prefer to believe that our future prosperity does not hang upon the continuation of the war. I believe that our industry, foresight and willingness to co-operate with the present opportunities offered—the greatest ever presented to any country in history—will determine the measure of our prosperity.

CANNED CORN 27 YEARS OLD.

Food Commissioner H. E. Barnard of Indiana had occasion, by invitation of R. J. Roulston, of the Chicago jobbing house of McNeil & Higgins Company, to inspect and test a can of corn recently which was packed twenty-seven years ago. Dr. Barnard's report is as follows:

Gentlemen.—We have analyzed the sample of corn left with me at the late convention and marked 'Packed 1888.' The gross weight of this can is 910 grams. The corn and liquor in the can weigh 755 grams and the liquor weighs 23 grams. The corn is packed a little more solidly than the present practice. When cut it was in first-class condition both in regard to color, consistency and flavor. It is interesting to note that the tin content was but 66.2 milligrams per 1,000 grams. The interior of the can is bright and clean, save around the cap, where it was darkened. But even at this point the can was not discolored.

"Our investigation of this can of corn is additional evidence, that properly canned goods will keep indefinitely, with no deterioration so far as food value is concerned and with little or no change in palatability. Yours truly, H. E. Barnard, State Food and Drug Commissioner."

RAISIN INDUSTRY INCREASES.

The California raisin crop is now about three times as large as that of Spain, according to a recent publication of the U. S. Department of Agriculture. About 60 per cent of this crop is grown in Fresno County alone. Last year it is estimated that the entire California crop amounted to 250,000,000 pounds. This unquestionably could be greatly increased if the demand warranted it. As a matter of fact, however, it is the practice to produce only enough raisins to supply the existing demand. In this connection it is interesting to note that as the domestic crop has increased, the importations of raisins have correspondingly decreased. In 1885 the imports amounted to over 38,000,000 pounds; in 1915 they were less than 3,000,000.

In the early days of the industry high prices were realized, the average from 1889 to 1893 being about 5 cents a pound. Prices then began to fall, however, until in 1897 raisins were quoted as low as $\frac{3}{4}$ of a cent a pound. The growers then perceived that in order to make the industry profitable co-operation was necessary. The first association disbanded after a career of approximately six years. Another attempt also proved a failure, and it was not until 1912 that a really successful organization was formed. An active effort is being made by this organization to bring raisins into more general use.

Bulletin No. 349 of the U. S. Department of Agriculture, "The Raisin Industry," has now been published. This bulletin gives much information on the raisin industry, the kind of soil required, the various methods of pruning, the varieties and methods of harvesting and packing. It points out also that as the raisin vines are not resistant to the Phylloxera, in order to make permanent, durable vineyards they should be grown on Phylloxera-resistant stalks.

MONKEYING WITH COFFEE RUMORS.

It's a dull day when the food speculators can't twist war news to their speculative ends in the market. The latest was the story which started, last week, that the Brazilian government had seized all the interned German ships in Brazilian ports, to be used for bringing coffee to this market. Coffee had been held stiff by reason of the known shortage of cargo space, but this sent it tumbling 15 to 20 points. Next day the reports were officially denied in Brazil, but the speculators had made the most of the short slump.

Sardines valued at \$73,211 were invoiced at the American consular agency at Brest, France, for the United States during 1915 compared with \$79,202 worth for 1914.

* * *

A proclamation of March 10, 1916, states that beginning March 13 the importation of canned, bottled, dried and preserved fruits, except currants, is prohibited except under license issued by the board of trade. The prohibition does not apply to the products of British dominions, colonies, possessions, or protectorates.

Facts About Newfoundland's 1915 Herring

By O. C. GOULD

SO far as any industry is peculiar to the territory within the jurisdiction of the Bay of Islands consular agency, that industry is the herring fishery. In this industry has been the one large American financial interest of this coast. In recent years the catch of Bay of Islands and Bonne Bay has constituted a very large proportion of Newfoundland's herring production, especially of the herring exported for food purposes.

In any discussion of the west coast fisheries, the two bays named are generally paired, and very properly so, for rarely is there heavy fishing in both bays at the same time. It is usually light in one and heavy in the other, and the relative position of the two bays in this respect may reverse several times during the progress of a single season.

The Newfoundland fiscal year is better suited for a statement of the herring catch than a calendar-year compilation from the declared-export returns of this office, because the herring fishery of each year holds over into the succeeding January. February and March see practically no herring fishing and are a logical division between the industrial years. Usually navigation closes because of gulf ice about January 10 and not later than January 15, at which time nets are taken up; ordinarily, by the close of January the entire catch is invoiced and shipped. In this respect the 1915 season was late, for gulf ice had not blocked Bay of Islands and Bonnie Bay on February 1, 1916. Though all the American schooners had then departed, some nets were still set, catching for the Scotch packers.

Based on this division of the year—the month of January, 1916, being substituted for the first quarter of 1915—and certain estimated data being added, the total Bay of Islands and Bonne Bay production of herring for food purposes for the American market during the season just ended was:

Period.	——Barreled.——	
	Domestic cured.	Scotch cured.
Declared exports during—	Pounds.	Pounds.
Quarter ended June 30, 1915.....	1,164,630	198,560
Quarter ended Sept. 31, 1915.....	293,800	7,700
Quarter ended Dec. 31, 1915.....	561,300	967,290
Month of January, 1916.....	506,600	1,449,515
Products of the American fishery as shown by statements of catch of December, 1915, and January, 1916.....	426,200	.....
Total production of herring as shown by official records.....	2,952,530	2,623,065
Estimated balance of exports to United States not consulated at this office...	600,000	3,000,000
Estimated total production of herring for food purposes for American market	3,552,530	5,623,065
Value of same	\$84,224	\$247,091
	——Bulk.——	
	Salted.	Frozen.
Declared exports during—	Pounds.	Pounds.
Quarter ended June 30, 1915.....	.....	.....
Quarter ended Sept. 31, 1915.....	.....	.....
Quarter ended Dec. 31, 1915.....	4,739,200	181,400
Month of January, 1916.....	680,800	1,891,500
Products of the American fishery as shown by statements of catch of December, 1915, and January, 1916.....	3,497,400	828,000
Total production of herring as shown by official records	8,917,400	2,900,900

Estimated balance of exports to United States not consulated at this office...	1,000,000	500,000
Estimated total production of herring for food purposes for American market	9,917,400	3,400,900
Value of same	\$159,707	\$63,579

At the date of writing not all of the herring caught during the 1915 season had been invoiced or shipped. Furthermore, very little of the Bonne Bay pack of Scotch herring is consulated at the Bay of Islands agency, most of it being handled by St. John's and Halifax firms—one shipper alone having exported upward of a million pounds of Scotch-cured herring for which no declaration was made here. Under these circumstances it seemed desirable to estimate and to include this balance in the foregoing table.

The outstanding feature of the local herring fishery now is the Scotch method of cure. One-fourth of the catch in Bonne Bay and Bay of Islands appears to have been cured by this method, as opposed to 16 per cent domestic cured; and the Scotch-cured article contributed 45 per cent of the total value of the catch compared with 15 per cent contributed by the domestic cured. If Newfoundland's use of the Scotch method produces an article thoroughly acceptable to the American market, the relative positions of the Scotch and the domestic cure will become even more favorable to the former.

During the past year the Scotch packers could not have used a great deal more herring than they did, and this fact, combined with some uncertainty as to the price in the United States, did not warrant their cutting actively into the field of the New England firms. The New England firms obtained their normal amount of herring, but at a considerable increase in price, and they may not fare so well another year. If the Newfoundland Scotch packers have the assurance of an American market even at prices somewhat lower than the top prices of the past season, they might be able to bid the American vessels out of much of their herring and many of their fishermen. Such a situation presupposes an equal number of fishermen; the excellent returns secured by the fishermen this season are likely to attract many others to the work in 1916.

Some entertain doubts of the continuance of the bay fishery for herring. Owing perhaps to the mild weather, herring struck into these bays later than usual during the 1915 season; and had not mild weather permitted the fishing to continue through January (1916) instead of stopping about the 10th of the month, as usual, the catch would have fallen below normal. In fact, although there was heavy fishing in Bonne Bay in December, it was only toward the end of January that heavy fishing was had in Bay of Islands, the herring in this bay being previously scattered in the outer reaches instead of in the narrow arms.

During several of the recent seasons there is said to have been greater uncertainty than formerly regarding the movements of the fish. Now, the herring are in and out, erratic in their movements, keeping the fishermen at their wits' end to judge where they would fare best. One explanation advanced is the increased number of motor boats used; another is the alleged pollution of certain waters by sunken nets filled with drowned herring. Others find the cause in peculiar combinations of wind, tides, and weather; but to whatever cause attributed, some experienced men are inclined to think that it will be necessary, in order to secure a plentiful supply of herring, to use drag nets in the Gulf and Straits of Belle Isle before many years.

The government built more than two thousand miles of trail and three thousand miles of telephone line on the national forests in 1914.



Gleanings from the World of Foods



ANNOUNCEMENT was made recently of the reorganization and enlargement of the \$32,000,000 Chicago packing concern, Sulzberger & Sons Co., by a group of New York financial interests who have taken over control of the company. It is stated that a majority of the \$20,000,000 outstanding common stock would be purchased by a syndicate consisting of the Guaranty Trust Company, Hallgarten & Co., William Salomon & Co., Thomas E. Wilson of Chicago, and others.

* * *

The Eureka Wholesale Grocery Company of Detroit has filed articles of incorporation at Lansing, Mich., with a capitalization of \$10,000. A. Flower, George Parsons, T. A. Toynton and others comprise the company.

* * *

Thomas N. Conway, Seattle sales manager for Armour & Co. for the past four years, has resigned his position with the packing concern. F. B. Carter, former district superintendent for the Pacific Coast territory, with headquarters in Seattle, will succeed Mr. Conway as sales manager.

* * *

The California Associated Raisin Co. has announced that it will exercise its options with crops for 1916 and 1917 under contract. No statement yet of the exact new acreage obtained in its recent campaign for further support has reached us, but it is apparently sufficient so that the Associated will continue as last year. The company has sent advices to raisin packers who are its selling agents that they may continue to sell 1915 crop under previous contracts with the Associated up to September 20. The Associated's prices are guaranteed to August 1. What quotations may be after that depends upon many conditions, of course, which may arise in the meantime, not the least of which is the British embargo against the receipt of dried fruit from California.

* * *

On a recent visit to a large machinery manufacturing plant it was learned that they were running 24 hours a day, turning out sugar-mill equipment for Cuba. Most of this is of the first grade, and represents heavy investments, and the concern has more orders than it can fill. It is stated that the antiquated machinery in many Cuban centrals is being very generally replaced with up-to-date makes, while some new mills are being opened. Business is excellent, and a general feeling of optimism prevails.

* * *

TEXAS ONION ESTIMATE BIG.

The Texas onion crop of 1916 is estimated by the Department of Agriculture to cover 10,657 acres, as compared with 9,343 acres in 1915, an increase of 14 per cent. The condition of the crop on March 1 was estimated as 65.6 per cent of normal, which forecasts a yield of about 230 bushels per acre, or a total production of 5,328 cars of 460 bushels, each. In 1915 the shipments amounted to about 4,607 cars.

* * *

FLOATING TUNA CANNERY.

Arrangements have been made by the Van Camp Sea Food Cannery and the Long Beach Tuna Packing Company to operate a floating cannery in connection with tuna packing during the coming season. The vessel for the floating cannery will be brought to San Pedro and equipped. Up-to-date canning machinery and labor-saving devices will be installed and the vessel will have a capacity of 2,000 cases of tuna daily. In addition it will be equipped with a complete fish meal and fertilizer plant, in which fish oil will be extracted and refined.

"The floating cannery could follow the fish all season, and smaller boats could operate to better advantage catching tuna than the present apparatus," said President Frank Van Camp in an interview. "The floating cannery will probably employ 100 people and be able to operate in Mexican waters long before the canneries here can open and long after they close in the fall. The floating cannery idea is merely supplementary to the canneries here which we would, of course, continue to operate."

PACKERS RAISE WAGES UNASKED.

An unsolicited raise in the wages of 5,000 packinghouse employes in East St. Louis was announced this week. The plants concerned are Armour, Swift and Morris, and the increases will amount to \$3,000 a week.

A similar increase was announced at the Chicago plants of these companies, and this raise involves many more employes than at St. Louis and many more thousands of dollars. This increase averages 6 per cent in the wages of packinghouse workers.

* * *

MORRIS TO BUILD IN URUGUAY.

Morris & Company have bought 200 acres in Montevideo, the capital of Uruguay, for the purpose of putting up a meat plant to cost \$2,500,000, according to Herman L. Spahr, United States consul at Montevideo. The daily capacity of the plant will be 1,200 cattle, 1,500 to 2,000 sheep, and as many hogs as may be obtainable. Some interest in the new venture is being given to Uruguayan cattle raisers. At present there are two other plants in Montevideo, the Frigorifico Montevideo, which belongs to Swift & Company, and the Frigorifico Uruguay, a concern controlled by the Compania Sansinena of Argentina.

* * *

MUTTON FROM SOUTH AMERICA.

One of the heaviest arrivals of foreign mutton since the import trade began in fresh meats was at New York recently, when the steamship Vestris arrived from Argentina with 83,321 carcasses of mutton and lamb. The boat brought about 10,000 quarters of refrigerated beef as well, but the mutton consignment was exceptionally heavy.

In this connection it is interesting to note that an inquiry has been received from the American consulate at Punta Arenas, Chile, asking whether a market can be found for 2,000 tons of frozen dressed sheep, 11 cents per pound, cost free on board, shipment in June and month following.

* * *

STATE CANNERS ELECT.

At the final session of the New York State Canners' Association March 10 at Rochester, N. Y., these officers were elected:

President, F. S. Thorne, Geneva; vice president, R. M. Decker, Batavia; secretary, A. R. Hunt, Oswego; treasurer, S. C. Hemingway, Lyons.

Dr. C. Graham Rogers, director of industrial hygiene of the department of labor, told the convention in his recent inspection of state canning factories he found conditions generally good, even in camps.

* * *

BIG ARMY FOOD CONTRACT.

The British government has awarded a contract for 600,000,000 one-pound cans of beef stew for use as army rations. The contract, the aggregate value of which is \$91,000,000, was given to a new corporation known as the Imperial Canners, Limited, of Montreal. This concern has begun to apportion the business among American and Canadian packers, wholesale grocers and canners. This is declared to be the largest single order for army rations placed in North America.

The contract will require about 300,000,000 pounds of beef and 1,500,000 bags of rice, together with millions of pounds of white beans, carrots and onions.

* * *

YEAR'S RECORD IN JAPANESE TEA.

In a review of the Japanese tea trade for 1915, the Japan Times says that the shipments to the United States showed a gain of 4,309,200 pounds in quantity and of \$896,400 in value. It states as a noteworthy fact that the shipments to Canada, which had been on a steady down grade, suddenly rebounded to the old level, with a gain of 51 per cent in value. The destinations of the shipments for the year are

BEER A PURE DRINK

Adulteration, Substitution and Coloring of Product Not Practiced by Brewers—Their Product Can Not Be Tampered With

BREWERS ALL FAVOR PURE FOOD LEGISLATION

In all the history of brewing, from the days of Tacitus, the Roman Historian, who first mentions beer as an accomplishment of the German women, down to the present date, beer has always been considered one of the most healthful drinks on account of its purity. Made from malted grains and hops and sterilized water, it is produced so cheaply that there is no incentive for adulteration or substitution and any color desired from light to dark can be easily obtained by varying the process of malting, making the use of coloring matter unnecessary.

Some time ago Dr. F. E. Englehart, State Analyst for the New York State Board of Health, examined 476 samples of malt liquors and made this report:

"No substitute for hops has been found and no harmful ingredient has been detected. Not one of the samples of malt liquors officially analyzed contained either hop substitutes or any other deleterious substances the use of which could, from any rational point of view, be regarded as an adulteration."

As far back as 1885 the Twenty-fifth convention of the United States Brewers' Association advocated the Pure Food and Drink Bill by this resolution: "We are anxious to have the sanitary officers do their full duty in our case, as this is the shortest, surest way of counteracting the unfounded talk about adulteration. If any law can be passed to make the surveillance over food and drink any more stringent, this association will be found among its supporters."

When the Pure Food Bill was before the United States Senate in 1905 Senator McCumber found the Brewers' Association true to their word of twenty years before, for he says: "I believe that we manufacture in this country the purest beers that are made on the face of the earth, and the fact that the brewers' associations are all in favor of this bill is proof that they are satisfied that they make a pure article."

Beer is, furthermore, about the only article of commerce that can not be tampered with by the trade. If a bottle is opened it is soon flat and worthless. If a keg is touched its contents are lost. Almost every other beverage can be, and often is, tampered with by unscrupulous retailers. The very nature of beer makes this impossible.

BEER CAN NOT BE "DOCTORED"

given as follows: United States, 39,445,830 pounds, valued at \$6,196,116; Canada, 5,442,360 pounds, valued at \$837,636; other countries, 1,549,450 pounds, valued at \$204,678.

A comparison of the total trade with the preceding two years shows that there were 42,238,970 pounds, valued at \$7,439,426 in 1915; 36,778,100 pounds, valued at \$5,974,008 in 1914, and 39,925,270 pounds, valued at \$6,782,262 in 1913. In explaining the gain in exports it is suggested that owing to the decline in the trade for the previous years, the visible stock in the United States and Canada had been re-exported to Europe instead of supplying an increased demand in North America.

It is stated that the trade of 1916, it is feared by many persons, may be affected to some degree by the increased shipment of lower grade goods in the season just closed. The newspaper continues:

It is, indeed, a reasonable fear in view of the greater use into which machines have been brought during the year just concluded. In Shidzuoka this ominous tendency among producers has brought about a scramble for raw leaves, and in consequence a great advance of 30 per cent in the price of raw leaves.

With an eye to taking the chance thus offered, tea growers have purposely postponed the picking of leaves, and only when the leaves grew bigger and tougher was all the picking done. Growers may have thus made a greater gain, but the quality of manufactures has inevitably deteriorated.

Among all sensible persons concerned, accordingly, the opinion is obtaining that, unless the relapse into the old depression is desired, this bad practice must be discontinued at once.

* * *

NEW WHOLESALE HOUSE.

With an incorporation of \$10,000 the Lee Wholesale Grocery Company entered the field recently at Bishopville, S. C. The following officers have been elected:

President—Dr. S. B. DuBose.

Vice-president—M. D. Scarborough.

Secretary-treasurer—Geo. E. DuBose.

Mr. Geo. E. DuBose is also the manager of the company.

* * *

LIMA BEANS FOR EXPORT.

California produced 2,775,000 sacks (80 pounds each) of dry edible beans last year. Over half the yield—1,500,000 sacks in 1914—consists of limas, which are in demand not only in the United States but for export. A Ventura report says bean associations there have recently received inquiries in regard to limas from Australia and Japan, two new consumers.

Lima-bean growers are forming co-operative sales organizations this season throughout California. Several in Ventura County have entered into an agreement to sell their 67,000 sacks (80 pounds each), while another Ventura organization has been formed to dispose of 50,000 bags. Some of the associations are building warehouses and cleaning plants, one at Garden Grove costing \$4,000.

* * *

SPECIALTY MEN WILL STUDY.

The New York Auxiliary of the American Specialty Manufacturers' Association has decided to put its plan for studying the filling of specialty orders by jobbers into operation.

It will be recalled that the auxiliary has had this plan under consideration for several months past, but has deferred putting it into operation till it had ascertained certain facts and had secured the full co-operation of their principals at the home offices of the concerns represented.

It is probable that about 200 jobbers will be asked to co-operate in the movement. The scheme is to have every order turned into a jobber to be filled, accompanied by a blank form for the jobber to fill out. This will state whether or not the order is acceptable; if not, why not; when received; when filled; if not filled, why not; if not filled for any reason, whether and when any subsequent attempt will be made to fill it; together with sundry other similar information. Each night, the jobber would mail all such slips, properly filled in,

for all the specialty orders of the day, to the office of the American Specialty Manufacturers' Association, at 100 Hudson street, where a special clerk in the employ of the secretary will receive them and distribute them to the several members of the auxiliary with whom they originated.

It is hoped in this way to check up orders, learn the real cause for leakages in orders turned in by specialty salesmen to jobbers and not filled; in fact, to make the central office a clearing house of facts, in the hope that out of it may come corrective measures. It is understood that the jobbers are as much interested in determining the truth of the case as the specialty men and willing to co-operate to the desired end.

* * *

MEMPHIS JOBBERS ENTHUSIASTIC.

That the annual meeting of Southern wholesale grocers in Memphis next May is being looked forward to with a great deal of expectant eagerness is evidenced by the following statement contained in a letter from Mr. R. P. Woodson, manager of the J. T. Fargason Co., wholesale grocers and cotton factors:

"I have never known the wholesale grocers more enthused over anything than the fact that the next convention will be held in our city. You will certainly have a warm welcome, and we hope that the members and their wives will be entertained in such a way that they will never forget Memphis."

No doubt the wholesale grocers from various sections of the South who attend the Memphis event will find much pleasure and profit in making the acquaintance of their brethren there and discussing with them the trade and economic questions confronting their interests. The Memphis jobbers have appointed committees to take care of their visitors and handle the details of the sessions. In this connection a letter from Mr. J. R. Paine, secretary-treasurer of the White, Wilson, Drew Co., says:

"It is our hope and expectation that this meeting will be largely attended, and you may depend upon the Memphis wholesale grocers doing their part toward making it a success from every standpoint."



A liberal featuring
of
Libby's Food
Products
marks the high grade store

Libby, McNeill & Libby
Chicago

WHY SACCHARIN WON

The Long, Contested Suit of the Monsanto Chemical Works of Saint Louis, Manufacturers of Saccharin, Is Finally Decided in Its Favor.

The Supreme Court of the State of Missouri in handing down its *unanimous* decision that Saccharin is not deleterious to health, and declaring null and void the statute prohibiting its use recognized the principle that the amount used must be considered. This, the Supreme Court of the United States also did in its decision in the famous Bleached Flour case.

An excessive use of anything is harmful, whether it be sugar, salt or water.

SACCHARIN is much more desirable than sugar as a sweetening agent for soft drinks from any view point: (First)—Healthfulness; (Second)—Economy.

In using SACCHARIN the danger from the use of sugar is eliminated, and the infinitesimal amount of SACCHARIN that is required to sweeten cannot possibly be harmful to any one, either adults or children.

Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

Use SACCHARIN to sweeten and do not hesitate to declare its use on the label. **Such declaration stamps your goods as being healthful.**

MONSANTO CHEMICAL WORKS

Manufacturers of Saccharin

ST. LOUIS

Branch: Platt and Pearl Streets, New York

Coconut Industry of British North Borneo

By J. N. WARDROP

AN interesting article on the cultivation of coconuts in Borneo recently appeared in one of the Singapore papers. It was written by a senior government official, the Resident of the East Coast district, and can be taken as fairly reliable. After stating that more interest is now being manifested in the development of the coconut industry than ever before, and that it is becoming more and more difficult to acquire suitable land in the Malay Peninsula, the Resident continues:

"Ceylon already has a million acres of land under coconuts, while North Borneo, enjoying very similar climatic conditions and almost equally favorable labor facilities, can boast but a few thousand acres. The reason for this is mainly that North Borneo is away from the regular track, and investors are naturally drawn first to such countries as the Malay Peninsula and Ceylon, where conditions and results have been well proved. But the time is coming when they must go farther afield, and North Borneo lies ready at hand.

"I shall endeavor in the space of this article to answer satisfactorily such inquiries as would naturally be expected from one seeking land in the State of North Borneo. The country has an extensive coast line, indented at almost equidistant points by five excellent harbors, between which a double service of steamers maintains regular communication. The Chartered Co. has for some years very seriously applied itself to the problem of creating for its ports a trade that shall repay the capital expended on the various improvements which are continually being added: North Borneo is linked with Singapore, Hongkong, and the south Philippine Islands by British steamers affording conditions of travel closely approaching the luxurious. The Sabah Steamship Co., a local enterprise, has lately built and put on the run a very fine new steamer in addition to two smaller steamers that for many years have been of the greatest value to the country.

"In the matter of telegraphic communication, as long ago as 1906 the Chartered Co. realized that an overhead wire through dense jungle could never be relied upon as a faultless system. Four wireless installations have now replaced the old line. Such is the reply to the first inquiry to be expected as to how one may get to Borneo, and whether one is cut off from the world when there.

"Next to its railway, which brings the magnificent valley of the Padas River into direct touch with the West Coast port of Jesselton, the Chartered Co. has expended most of its energies in endeavoring to discover what its territory [see Supplement 59a to Commerce Reports for June 15, 1915] contains and what form of development is most likely to prove successful. That agriculture is the line of advance there can be no question. Borneo rubber estates have done wonders and compare for growth and condition very favorably with other countries. We are not likely to see any extension of this industry, but we have up our sleeve perhaps some of the finest coconut land in the world. This may sound like an exaggeration, but it is a fact which will bear the closest investigation.

"So far, with two important exceptions, coconut lands are held by private persons. Many Asiatics have acquired considerable wealth from their coconut gardens, but European enterprise has been backward. There are, however, two good examples in the Lahad Datu Culture Co.'s estate of 1,400 acres in Darvel Bay and the Merguan estate in the vicinity of Sandakan. At Sandakan, Kudat, Lahad, Datu, and Tawao the areas under cultivation increase steadily from year to year.

"Agricultural land can be obtained by direct communication to the Governor in North Borneo or, in the case of large areas, to the Court of Directors in London. Recent

legislation has decreed that no State lands shall, as formerly, be acquired by purchase and that land will be alienated only on payment of an annual quit rent. A premium may or may not be demanded; in the case of coconuts especially easy terms may be obtained. In no case does the quit rent on coconut land exceed \$1.39 United States gold per acre, and a greatly reduced rental can be obtained during the first five years of development. The surveying of lands and the preparation of titles are undertaken by the Survey and Land departments, while the direct supervision of lands is relegated to the Collectors of Land Revenue in their respective districts.

"The applicant is left practically a free hand in the selection of his land, subject to such reservations as native or communal rights and restriction of frontage on river banks, roads and railways. Once the land has been selected and a temporary occupation license issued, the planter may go ahead and fell the jungle. When he has satisfactorily completed his business with the Land Office the planter will have to deal with the Protectorate, which takes the place of the Labor Department in the Malay States, and the Medical Department.

"No difficulty need be anticipated in the matter of obtaining labor. There are Hongkong, Java and Singapore on which to draw, and sufficient reputable agencies exist in the various centers through which a labor force can be collected at reasonable expense. Labor troubles are a rarity, and estates receive frequent visits from district officers who exercise the powers of assistant protectors.

"The medical department supervises the sanitary conditions of estates. Plans for coolie lines, bungalows, water supply and kindred matters are submitted to the principal medical officer for approval. The regulations on both these subjects very closely resemble those in existence in the Malay States and can by no means be considered irksome.

"The prospective coconut planter has a rich and almost inexhaustible extent of land from which to make his selection, and he would be best guided by his own judgment after spending some time in looking around. There is no necessity to go far afield; in Darvel Bay and Sibuco Bay on the East Coast, in particular, available land lies close to the ports of Lahad Datu and Tawao. From Sandakan also new lands will shortly be rendered available by the construction of the first five miles of a road destined eventually to reach the heart of the country. In any case the coast line everywhere is cut into by tidal rivers navigable by steam launch, and many estates have been opened on the banks of such rivers. Care should be taken on the East Coast to avoid rivers exposed to the northeast monsoon.

"The capitalization of a coconut estate will be no higher than in Ceylon or the Malay States. The average cost of bringing a tree into bearing should not exceed \$0.83 United States gold, and in one case, where the trees are bearing nuts at the beginning of the fifth year at Gawa Gawa in Darvel Bay, the cost was considerably less than that sum. Fencing is everywhere a necessity, but a strong timber fence made from trees felled on the estate does not add seriously to the cost of opening. Seedlings are not obtainable in very large quantities yet, and would probably, in the case of a large estate, have to be imported. The local price is about \$7.78 gold per hundred, but as much as \$11 is paid for the best qualities.

"The State collects an export duty of 2½ per cent on the value of copra exported, but beyond that and the rent no further taxation exists at present with the exception of import dues on various commodities."

Get your happiness out of your work or you will never know what real happiness is.—*Fra Elbertus.*

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The discussion about using starch in Compressed Yeast has reached the point in the United States of a decision forcing those who used it to declare the fact on the wrapper or label.

That is how we administer the Food Laws in this country.

In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

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CHICAGO, ILLINOIS

New Deep-Sea Food Fish

Of the tragedies which occur in the sea and the great disasters which befall the lowly dwellers therein we know but little, and the brief but tragic history of the tilefish therefore has peculiar interest. The discovery, the almost complete extermination, and the rapid re-establishment of this large, handsome, and potentially valuable species, all within the space of less than 15 years, is one of the remarkable stories of marine biology.

So far as is known, man had never seen this fish until May, 1879, when Capt. Kirby, of the fishing schooner William V. Hutchins, while fishing near the hundred-fathom curve, south of Nantucket, caught several thousand pounds of a "strange and handsome colored fish." He sent a specimen to the United States Fish Commission, where it was found to be new and was described and named *Lopholatilus chamaeleonticeps*. This name, which means the crested tilus with a head like a chameleon, may be used, after a little practice, with more or less facility by men of science, but for everyday use something shorter was needed, so the describer exercised the Adamite privilege of a discoverer and, perpetrating a pun on the fourth syllable of the first name, called it "tile" fish. The fact that the fish was new was interesting, but what excited most attention was that it existed in enormous numbers within a short distance of the coast and that its edible qualities were of a high order.

Prof. Baird, the Commissioner of Fisheries, at once appreciated the economic opportunity afforded by the discovery and began investigations to determine the location of the fishing grounds and the feasibility of establishing a fishery, but before much could be done the tilefish was apparently practically exterminated by a mysterious disturbance along the edge of the coastal slope. The first news of this disaster came in March, 1882, when the master of a vessel reported that he had sailed for 69 miles through a mass of dead and dying fish floating at the surface. His first statement was that they covered a distance of 15 miles, explaining later that he feared to put his reputation for veracity in jeopardy if he stated the whole truth. Other vessels in March and April of the same year reported similar experiences, and from the various accounts it was estimated that the dead fish covered an area 170 miles long and 25 miles wide and that upward of 1,400,000,000 tilefish had perished. What killed them is not certain, but investigations of the water temperatures at the bottom, made by the Bureau both before and since the occurrence, indicate that it may have been due to a sudden chilling of the water. The tilefish, like the cod, is a bottom dweller; but, unlike the cod, it is of a family accustomed to the warmer waters of the Tropics. It finds a congenial temperature where the edge of the Gulf Stream touches the sea bottom, on a slope as steep as a mountain side, and there is, therefore, but a narrow strip on which the water is neither too shallow nor too deep. The Gulf Stream is a great warm oceanic river flowing between banks of cold water, not fixed like the solid banks of land streams but pushed one way or the other as the path of the stream approaches or recedes from the coast. There is evidence that about the time of the decimation of the tilefish the Gulf Stream was receding, and as it moved offshore its warmth no longer reached the bottom and the fish and other animals dwelling there were left in the chilly waters which took its place.

It is reasonable to suppose that being habituated to a warm and equable submarine climate they were killed by the cold wave which enveloped them. A few years afterwards, while the Gulf Stream was still "off soundings," investigations showed that it was again gradually approaching the coast, and it was predicted that in 1892 it would be flowing over a depth in which its deep stratum would again bathe the bottom of the New England coast, on which the tilefish formerly had abounded. The prediction came true, and the Fisheries schooner *Grampus*, in the summer of that year, caught a

few fish on the old grounds, although persistent search in the preceding 10 years had failed to reveal a single specimen. Evidently the return of congenial conditions caused the fish to immigrate from areas in which the mortality had not been so complete, probably farther south along the coast.

Whether the straying of the Gulf Stream was or was not responsible for the mortality suffered 10 years before, the return of the current to its old course was coincident with the recurrence of the tilefish, which has yearly increased in numbers in its old haunts until now it is apparently as numerous as ever. The Bureau of Fisheries believes it to be capable of supporting a great fishery and adding a desirable fish to the market. It is a large, beautifully colored fish of excellent food qualities; and as it is easily caught and is found in great abundance, probably at all seasons of the year, within 100 miles of the coast, it can be placed on the markets of the New England and North Atlantic states in excellent condition.

Two things appear essential to give it the place to which its economic and edible qualities entitle it—the acquaintance of the fishermen with its abundance, ease of capture, and the accessibility of its habitat, and the appreciation by the public of its excellence as food.

To the fishermen the Bureau is demonstrating, by actual trial, the economic possibilities of the fishery and the results will be made public through the press. It is also furnishing in this circular a sketch map showing the location of the grounds on which the fish are known to exist in commercial quantities.

Though the qualities of the tilefish and the accessibility of the grounds make it especially adapted to the fresh-fish trade, it is also excellent lightly salted and smoked like finnan haddie, and a temporary glut in the market may be relieved by preparing the surplus in that way. As a by-product the sounds are valuable, for they are of large size, and analysis has shown them to be equal to those of the hake for the production of gelatin or isinglass.

To the consumer the Bureau is bringing the fish at a reasonable price through the regular market channels, with the recommendation that it be given a trial, and that it may be suitably prepared and cooked a number of recipes by a well-known chef are here presented.

Raw Pork Dangerous

There is always the possibility that illness may follow the eating of pork that is raw or not thoroughly cooked. The danger is greatest at this season of the year when many people prepare for home consumption various food products that are customarily eaten without cooking. More of these home-made products are prepared at hog-killing time on the farm than at any other time.

American people as a rule prefer cooked pork, but there are many who, perhaps unknowingly, consume pork in an uncooked condition, either in the form of raw ham or uncooked sausages. In many localities considerable amounts of these products are made up and consumed at home, or distributed throughout the neighborhood. Large quantities of pork products intended to be eaten raw are also prepared commercially.

The disease known as trichinosis, which may result from eating raw pork, is caused by certain roundworms, called trichinae. These are microscopic in size and infest the flesh of hogs. The prevalence of trichinae in hogs is indicated by the fact that during nine years, 1898-1906, when the carcasses of hogs were inspected microscopically by Federal inspectors, of 8,000,000 carcasses so inspected, 1.41 per cent contained living trichinae and 1.16 per cent contained trichina-like bodies or disintegrating trichinae. In other words and in round numbers, trichinae were present in 1 out of 71 hogs, and if the presence of dead trichinae and trichina-like bodies is included, in 1 out of every 39 hogs.

Unlike many other infectious diseases, the severity of an

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"GOOD-BYE FLY"

According to Department of Agriculture Bulletin No. 118: Apply 0.62 pounds Borax to every 10 cubic feet of manure. Apply Borax particularly around edges; sprinkle with 2 or 3 gallons of water. This treatment should be repeated with each addition of fresh manure. Flies lay their eggs in fresh manure. Borax prevents their hatching.

Don't use more Borax than recommended above.

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attack of trichinosis depends upon the number of parasites swallowed. Large quantities of slightly infested pork must be eaten in order to produce appreciable effects. If severe illness follows the eating of a small amount of the meat, the pork must have been heavily infested.

In about 1,200 American cases of trichinosis, the most frequent sources of infection reported were raw sausage, 225 cases; raw ham, 213; raw pork (kind of product not specified) 185. The most serious outbreak of trichinosis in the United States in the number of persons affected was that of November-December, 1911, in California, in which 58 cases, with 1 death, resulted from summer sausage made by a farmer and peddled by him in the neighborhood.

Another outbreak occurred in Wisconsin about a year ago in which 21 cases, resulting in 3 deaths, developed in 5 families. Early in December a hog which had been on the farm of the first family for three years was slaughtered and part of the meat made into sausage. The next day some of the sausage was fried slightly and eaten. Two of the members of this family died. There were eight cases in three other families which procured some of the sausage immediately after it was prepared and ate it raw or imperfectly cooked.

To avoid trichinosis, no form of pork in the raw state, including dried or smoked sausages and hams, should be eaten. All pork used as food should be cooked thoroughly. If this is done the value or wholesomeness of the meat for food purposes is not impaired by the fact that the parasites were present in it.

According to specialists of the Department, trichinae die when subjected to a temperature of about 140° F. All products containing pork which are prepared to be sold as cooked products in establishments operating under Federal meat inspection are required to be cooked sufficiently to insure a temperature high enough to destroy trichinae throughout all portions of the meat. Likewise, in order to protect consumers who are careless or ignorant of the danger of raw pork products of kinds prepared customarily to be eaten without cooking, such as certain kinds of hams, and summer sausage, must be manufactured in accordance with methods which, it has been determined, destroy the vitality of any trichinae which may be present in the pork. It has been found by investigations in the Bureau of Animal Industry that if pork is subjected to a temperature not higher than 5° F. for 20 days, the vitality of all trichinae is destroyed. This is one method of safeguarding pork products that are to be eaten without cooking. Other methods followed in establishments operating under Federal meat inspection consist in curing and drying the products according to certain rules which the manufacturers are required to follow.

Although products that are specially prepared for eating uncooked and bear the mark of Federal inspection may be used with safety, the custom of eating raw pork is not to be encouraged. In any case it should be remembered that fresh pork or ordinary cured pork products are not safe as food unless properly cooked. It can not be determined with certainty by inspection whether pork is free from trichinae, and the Federal meat inspection mark does not guarantee the fitness of pork for food if it is eaten raw.

Contrary to all forecasts, even those made as late as August 1, which predicted a rather larger harvest of currants than normal, the actual harvesting, which is now practically finished, seems to prove that the crop of 1915 will turn out hardly 130,000 tons of fruit altogether as compared with a normal of about 155,000 tons. The quality of the fruit, too, which promised during the summer to be good, proves with harvesting to be only medium. It appears that the disease of peronospora, which appeared in the vineyards in early summer in apparently mild form, actually caused poor nutrition of the fruit, with the result that much of it failed to mature, and fell off at ripening season. In addition, the fruit was caught by rains in several of the provinces while it was upon the drying grounds, and large quantities of it became rain-damaged, especially in the Pyrgos-Catocolo regions, from which Provincial and Amalias grades of currants are mostly shipped to the United States.

Banana By-Products

The methods of inspecting and loading bananas hitherto used at the ports where they are shipped have been exceedingly wasteful. Great quantities of the fruit are thrown overboard, one bunch because it is a little bruised, another because it has grown too loosely, another because it has less than eight "hands." Stock will eat green bananas, but the amount thrown in the bay at Port Limon alone, for example, is enough to feed five times the head of stock in the place and all the people as well.

When the problem of utilizing this waste was first taken up, many statements had obtained currency to the effect that bananas were a remedy for tuberculosis; and it was in the belief that a fortune could be made by preparing the waste fruit to be used as a medicine that experiments began. Although it was soon determined that this was a delusion, the work was continued with a view to putting on the market a nutritious and strengthening food, and a process was finally arrived at and patented in Costa Rica. In the meanwhile, however, interests in Jamaica had been working along the same lines; and, as they had more capital and better means of putting the product on the market, had managed to make banana flour a well-recognized food in Europe, and especially in Germany. In Hamburg a number of houses reported that the difficulty was not to sell the flour, the "chips," and the "figs," but to obtain a sufficient supply for the demands of the trade.

The banana "figs" as they are called, form a very palatable and unusual confection. They are simply ripe bananas dried by artificial heat. The evaporation of the water reduces them in size until they are scarcely larger than a man's finger, while the natural sugar in the fruit gives a flavor—not that of a fresh banana, but one hard to describe, not too sweet and very agreeable. They are quite digestible. The banana "chips" are quite like the potato chips with which everyone is familiar. Like the flour, they are made of the bananas when not quite ripe. The vegetarians of England and Germany have prepared a number of recipes for the preparation of all three of these products, and it is evident that in the utilization of waste bananas a food product of considerable value has been set before the public.

The equipment of the plants is very simple and comparatively inexpensive, and labor is cheap in Costa Rica. Doubtless the large banana exporting companies would be very glad indeed to quote such prices on the rejected fruit as would enable a factory to make a profit; and the same is probably true of the owners of the independent plantations, for there is an absolute loss on the bunches that do not reach the standard size, and they are only cut to be destroyed, fed to the stock, or given to the hands.

When all this is considered it seems as if a good opportunity was being missed to put before the consuming public in the United States a food that is highly nutritious, that will keep indefinitely, and that is reasonably cheap and likely to become more so as the processes of manufacture and the methods of handling are perfected. The owner of the process in Costa Rica is willing to forward samples on receipt of a remittance sufficient to cover the cost of a parcel post package (for which an American dime may be sent); or he is willing to dispose of the plant and patent as he has not the capital to go into the business on a large scale. His plant is not at present properly located, as it is at San Jose, the capital, which is some distance from the banana-growing districts and the ports, and the rates of transportation from one to the other are very high. With a change in this respect, however, an increase of capital, and the development of the business with a view to the export trade, it seems reasonable to believe that something could be made of it.

The timber industry represents 37 per cent of the annual production of wealth in British Columbia.



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AN IMPORTANT ANNOUNCEMENT

TO THE JOBBER AND RETAILER



The St. James Importing Company, of New York and London, the well-known distributors of Waw Waw Sauce, has been bought by men of strong financial backing who bring to the Company not only ample resources but also the full benefits of many years' experience with one of the largest and most successful manufacturers of food products in the country.

Plans are already laid to place Waw Waw in its deserved position as the King of Table Sauces.

We cannot make Waw Waw Sauce itself any better but we can and will make Waw Waw Sauce a better seller.

An extensive advertising campaign in the leading Journals is now in course of preparation. No pains, expense or effort will be spared to make Waw Waw a leader in easy, steady selling, just as it is now a leader in quality.

Full details of the new plans will be mailed to jobbers and retailers throughout the country. In the meantime the already increasing inflows of orders are being filled promptly from our New York warehouse.

SPECIAL—If you are not fully acquainted with the unusual merit of Waw Waw Sauce, write at once and a full size sample bottle will be sent for trial on your own table.

St. James Importing Company NEW YORK

Poultry Packers Cautioned

Poultry packers are urged by the specialists of the Department to give unusual attention to preparing and packing their birds for shipment, particularly if the mild weather, which has been widely prevalent this autumn, continues. The poultry specialists say that the weather conditions in many sections have been very similar to those which prevailed in the autumn of 1913, and which, as poultry shippers will remember, proved disastrous to all packers who did not dress, chill, and pack properly.

The specialists therefore recommend the particular observance of the following methods of handling dressed poultry, which are essential to a perfect product at any time and are of vital importance whenever weather conditions are unfavorable:

1. Keep the holding batteries for your incoming stock clean, well aired and free from vermin, and see that the chickens have plenty of fresh water and plenty to eat.

2. Don't kill a chicken when the crop is full of feed. Give the chicken only water for 24 hours before it is killed. Food in the crop or in the intestines of a dressed chicken causes loss of flavor and hastens decay, which more than offsets any gain from extra weight.

3. Good bleeding is absolutely essential to a good appearance on the market and retards decay. Circular 61, Bureau of Chemistry, U. S. Department of Agriculture, explains the best methods of bleeding and loosening the feather muscles for dry picking.

4 Hang the chicken by both feet while picking. Hanging by one leg spoils the shape of the bird. Picking on the lap gets the skin dirty and hastens decay.

5. Dry pick if possible. Scalding is particularly undesirable because it hastens decay.

6. Chill every dressed bird until the body temperature is below 35 degrees F. Never pack or ship an imperfectly chilled bird. More decay is due to imperfect chilling than to any other single factor in dressing. Dry chill, if possible. Chickens cooled in water lose flavor, decay sooner, will not cold-store as satisfactorily as dry-chilled, and are in every way more undesirable on the market. Refrigerator cars will carry well chilled goods in good condition, but they cannot chill warm goods to a sufficiently low temperature.

7. Pack in boxes or small kegs whenever possible. A large barrel makes an undesirable package, because where poultry is packed in large masses the weight of the upper layers crushes the birds at the bottom.

8. Line all packages with parchment paper and cover the top of the poultry before the lid is put on.

9. Wrap every head in suitable paper so that blood from one bird will not mar the appearance of another.

10. Use only good refrigerator cars and see that they are in good order. Ice and salt the car 24 hours before loading. The car, at the end of 24 hours, should show a temperature below 40 degrees F. at a point 4 feet above the floor and between the doors.

GENERAL SUGGESTIONS.

Never handle chickens roughly either before or after killing. Rough handling causes bruises, broken bones, scarred skins, and soft places in the flesh. Undue haste on the part of the killers and pickers results in lowered keeping quality and poor appearance of the product.

Piece work which leads to quantity rather than quality makes for lower prices on the market. Those who pay by the piece should remember that they sell by the quality of the piece.

These directions will apply with equal force to turkeys intended for the holiday market.

DIRECTORY OF FOOD CONTROL OFFICIALS

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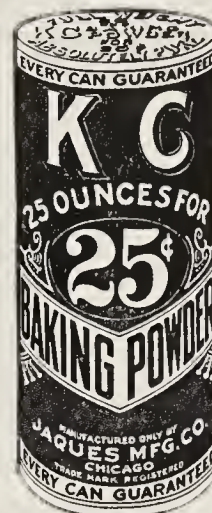
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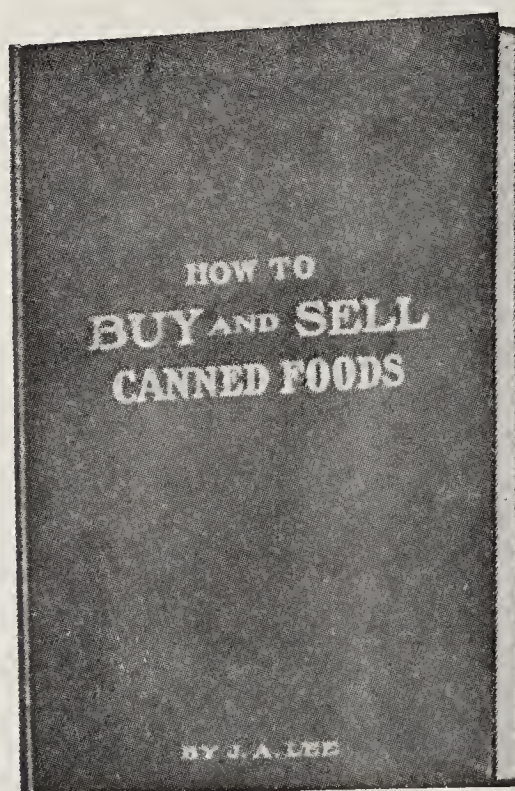
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THE AMERICAN FOOD JOURNAL



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NUMBER FIVE

Chicago, May, 1916

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Vol. XI.

MAY, 1916.

Number 5.

Allyn and Others Condemned

IN a report which fairly sizzles with unmistakable terms of condemnation, The American Chemical Society has refused to expel from its body Lewis B. Allyn, the Westfield notoriety, who, together with others, appears in the report of the committee of investigation as a "single self-constituted 'authority,' possibly having little or no scientific standing, often of narrow training and experience."

It has been gathered from an absolutely reliable source that Mr. Allyn was saved from expulsion by a mere technicality governing the rules of admission to the Society, or, rather, by a lack of rules governing admission. As no rule or standard of ethics, as identified with the Society, had been violated by Mr. Allyn, the ground of action collapsed, in spite of the moral incongruity of the acts charged.

The report, however, is far from a vindication and will go down in the history of food control as one of the most stinging rebukes ever administered to an apostle of food publicity. The report follows in full:

Your committee begs to report as follows:

I. After due consideration of the facts and evidence presented we recommend that no further action be taken leading to the expulsion of Mr. Lewis B. Allyn from our Society, and we recommend that the St. Louis section be so informed.

II. Special pure food movements, of which the so-called Westfield campaign is but one, seem to have originated and received their impetus from the recognition of the fact that the public desires a positive guarantee of the purity of foods and of toilet preparations. This demand is indeed appreciated by public officials, but the recognition in a positive sense of individual articles is as yet the exception and not the rule. The most common form of public service in this field by the national government, the states, the municipalities, consists rather in exposing

misbranded or fraudulent preparations, in prosecuting infringements of the law and in assisting manufacturers to comply with legal requirements.

On the other hand, these special movements which have been exploited by magazines and other publications in connection with their advertising columns must be considered *altogether wrong in principle and opposed to the best interests of the public*. The following are the reasons leading to this conclusion. All or part of them apply, we believe, to the various individual forms, which movements of this kind have taken.

(1) Almost without exception, profiting financially by means of advertising is directly connected in one way or another with such campaigns. The movements are therefore not *disinterested*. In the very nature of the case pressure is quite likely to be exerted by advertising departments on the editorial department and on the policy of the publication. A bias may thus be created, which has no proper place in matters demanding purely scientific and judicial decisions. This bias in debatable cases will often lead men, consciously or unconsciously, to yield to private gain rather than to public interests. Furthermore, for the sake of large financial returns, such a campaign is almost certain to be used by some agent or other, such as the advertising manager, to bring what must be considered an illegitimate kind of pressure to bear on those who advertise food products or toilet preparations, to have their advertisements appear in the publication conducting the campaign. Such a campaign in itself must be considered a form of unfair coercion.

(2) Special campaigns of this character have neither the large means nor the high scientific standing needed to secure a really efficient and reliable guarantee to the public. Any guarantee which they

afford may become utterly worthless, and, by inducing a false sense of security, may indeed do positive harm, if it is not supported by *continuous* control, including unexpected examinations, and by persistent official inspection covering all phases of food control, such as the inspection of the places and methods of manufacture, their sanitary surroundings, and the quality and condition of materials used. The public control of the milk supply, as it has developed in recent years in some of our larger municipalities, is an illustration of what adequate control must aim at.

In the light of all experience these special campaigns are likely to be supported by wholly inadequate chemical and bacteriological staffs and by altogether insufficient forces of inspectors, for the indispensable routine work of the thorough-going and continuous control by analysis and inspection. This defect, quite aside from motives of gain underlying a campaign, makes such a propaganda of very questionable value to the public.

(3) In place of developing and adopting standards on the basis of exhaustive and authoritative investigations by men of the highest scientific training and experience and of obviously disinterested motives, such campaigns as a rule depend on the dictum of some single self-constituted "authority," possibly having little or no scientific standing, often of narrow training and experience. Proper organization of such a movement demands facilities for disinterested scientific investigations by a staff of chemists, bacteriologists, physiologists and physiological chemists, or at least should depend for its final authoritative control on the combined judgment of a group of men of special training and recognized standing in these lines of scientific work.

III. In view of the defects of endorsement of preparations by special food movements, as exploited by magazines and other publications, and in order that the just demand of the public for positive information guaranteeing the purity of food and toilet articles, may be properly satisfied, the committee would urge that the Society consider formulating plans to be laid before governing bodies, which would lead to some kind of direct certification of food and toilet articles, by the national government, by properly organized and equipped departments of the states and larger municipalities, or some other forms of responsible control.

The preparation of a detailed plan involves questions of considerable difficulty, which the short time at the disposal of the committee has not made it possible for its members to study and decide. The committee, therefore, recommends that the formulation of such plans be referred to a special committee of the Council.

(The following paragraph of the report of your committee was proposed and endorsed by the non-official members of the committee.) These larger plans for public control are so much the more justified as the council of the American Chemical Society, in common with all well informed men, knows that the country has reason to have the highest degree of pride and confidence in the integrity, the disinterestedness and the competent character of the work done in the past and at present by the men engaged in the government food control.

It is with no slight sense of gratification that THE

AMERICAN FOOD JOURNAL notes the principles announced in the report of the committee. During the ten years of its life this publication has at all times contended that the prophet, the exhorter, the professional missionary, the man on the pedestal, the muck-racker clown, had no legitimate standing in the forum of public welfare and should be consigned to ignominious oblivion, there to remain in aeternum.

Fraud, deceit, trickery, misrepresentation, all and any manner of cheating, whether by omission or commission, should be condemned, prosecuted and punished, and the penalty should be such as to deter from repetition. But this should be done by properly constituted authority, and not by a soap-box professor or some glib-tongued know-nothing of the "advertising department."

There has been all too much hue and cry on the part of foolish fellows, whose main objective point was the dollar. The ignorance of the masses in matters pertaining to nutrition has been played upon by these charlatans of the advertising world.

The report of the committee clearly points to the tendency of scientific opinion at the present time. The most sedate and well balanced mind must rebel against the conditions which make it possible for anyone whose ambitions lie in these channels to practice such wanton abuse of the public confidence and in so doing actually thrive on the proceeds of the dirty business.

We are heartily in accord with the opinions expressed in the report of the committee and we believe that the findings of this distinguished body of scientists will go far to discourage and, eventually, we hope, eliminate entirely from the field of food control the swaggering mountebanks whose loud and brazen speech would have more fitting place in front of the tent of la Belle Fatima or of Jo-Jo, the dog-faced boy.

How long the public will endure the rot now running in a number of the country's well known papers, cannot be said. The people turn quite suddenly. They sicken of this sort of thing as does a child of sweets. The day will come, of course, when such stuff will not be given space in the editor's waste basket. In the meantime our hearty congratulations to the authors of the report.

And that their courage and sincerity may sow the seeds of better things to come!

BUTTER BOYS SCURRY TO SHELTER.

A hearing was held in the House of Representatives Tuesday, April 11, on the resolution of Congressman J. Charles Linthicum of Maryland calling for a Federal investigation of butter and the shameful conditions under which, in a large majority of instances, it is being manufactured and put into channels of distribution.

The panicky frame of mind of those representing the opposition to cleaner and better butter before the House Committee on Rules contributed largely to the fact that little or no progress was made at the hearing.

Furthermore it was plainly to be seen that a policy of obstruction and chess-playing had been previously outlined by those having good reason to fear the investigation.

At the end of the series of fruitless efforts to get down to business on the part of the advocates of de-

gency in the manufacture and sale of butter, the hearing was adjourned to May 4, when it will be resumed.

Readers of this publication may be interested to know that we are in receipt of a wild and scurrilous tirade from one J. J. Farrell, expert in the manly art of long distance personal abuse and mouthy flinger of actionable persiflage.

The latest batch of dry rot from the goat-robbed Solomon of St. Paul is vile, unfit for print and utterly lacking in merit. We consign it to the gutter where it belongs.

It is cheering to note that on every hand there are evidences of a great national awakening on the vital importance of reforming and regulating the Dirty Butter Industry together with its unscrupulous champions.

Exchanges shower daily into this office, showing the unmistakable signs of the times. If coming events cast their shadows before there can be no doubt in the mind of the Dirtiest Butter Boy that the tocsin has sounded its warning note and that rotten cream and filthy butter manufacturing methods have but a short way to go. So let it be. The shorter the better. There must be no temporizing or equivocation where the health and the lives of millions are at stake.

ABOUT CLEAN FOOD SHOPS.

The food officials of many states are giving attention to the sanitary condition of country and city grocery stores, according to the officials engaged in the enforcement of the Federal Food and Drugs Act, who recently have investigated the matter. The country store is both a collecting and distributing agency of foods. It sells foods of many kinds to the farmers and at the same time buys from them for shipment to the city, butter, eggs, fruits, vegetables, poultry, and other products of the farm. If the shelves and counters are laden with dust, if cobwebs hang in every nook and corner, if flies, bugs and vermin inhabit the place, the food products are certain to be more or less contaminated and likely to become dangerous to health. The reports from various state officials indicate that many stores have been found in the past to be in such a condition.

A clean, light, well ventilated store attracts customers, and the progressive merchant needs no other incentive to keep his floor, shelves, and counter spotlessly clean, which includes screening from flies and the elimination of all other insects. Some storekeepers, however, seem to require prodding from food and health officials to induce them to maintain that degree of cleanliness which will insure that the food they handle will be free from contamination. Some of the states have very effective sanitary laws which require frequent inspection of all establishments where foodstuffs are put up, manufactured, or kept for sale. Other states depend upon the general provisions of pure food laws which require that foods shall be free from contamination. A few of the states lack either a law that will reach the unclean store nuisance, or means for enforcing the law.

State food and health officials have used various means to control effectively the sanitary condition of places where foodstuffs are sold. One of the most effective means that has been employed is that of securing the co-operation of women's clubs and civic organizations. When a delegation of women custom-

ers call upon a merchant and suggest that he clean up, he is compelled to put his store in good condition and to keep it so. When the grocerymen in a town find that a large portion of the housekeepers are buying only from the cleanest stores, there arises a wholesome form of competition. A food inspector can, under even the best conditions, inspect a store but a few times during the year, because of the number he has to visit. The customers come every day, however, and when they act as unofficial sanitary inspectors, the merchant with the unclean stores cannot escape detection and punishment in loss of trade.

Competition in cleanliness has been secured in one state by means of colored placards which the inspector gives the merchants who keep their stores in a sanitary condition. A store in excellent condition gets a large white placard, one in fine condition gets a blue placard, and one in good condition gets a red card; the store that falls below the latter grading gets no card. The proprietors are permitted to keep the placards posted in a conspicuous place as long as the store is kept in the condition represented. There is keen competition among the merchants to get and keep the best placards. The buying public knows what the different colored placards signify and are particularly partial to the white placard stores. Other states have adopted a score card system similar to that used in grading dairies. The inspector scores each store where foodstuffs are sold according to certain points indicated on an inspection card. The scores are made public through the local press or by means of bulletins or circulars.

The sanitary condition of stores is subject to state or local control. The Federal Food and Drugs Act has no jurisdiction over such matters, except as to foods and drugs sold in the District of Columbia, territories, and insular possessions, which are under the direct control of the Federal Government. However, if food becomes contaminated in an insanitary store or in any other manner and is afterward shipped into interstate commerce, the party responsible for the shipment may be prosecuted under the federal law, and the contaminated food may be seized.

THE EMPLOYER AND THE MAN.

Some brainy fellow with the right idea has said:

"Pay large enough salaries to get employes with brains and you will not have to give up your own time to supplying brains for your help."

And when once you have decided upon the fitness and character of a man, when you have put him to the test and found him willing, honest and capable, do not commit the folly of roping him up like a steer for the mere gratification which you derive from a childish display of authority.

Turn him loose upon the responsibility of which he has shown himself worthy.

Put the problem of his success squarely upon his own shoulders.

Do not hamper him in his efforts to make good.

Show him, prove to him daily by your conduct towards him, that he has your confidence.

Remember that the first, the slightest intimation from you that you question his good intent, will most inevitably result in a breach which must sooner or later lead to separation.

A Father's Tribute to His Son

The beautiful tribute on this page comes from the pen of Dr. S. J. Crumbine of Topeka, Kansas, on the occasion of the recent untimely death of his only son, Warren, who departed life at Shanghai, China, on February 18.

Accompanied by his bride of a few weeks, he left us one beautiful September day with his face set toward the far-away Land of the Dragon, beyond the deep waters, where the people live in the shadows of yesterday. He was so happy and joyous, so strong and purposeful—a fitting climax to all the years of faithful preparation and sturdy growth of body and character.

How joyful and proud the parents and friends who accompanied him to the train seemed to be—for was not the realization of his and their ambitions and dreams full compensation for the pangs of separation? Did they not feel that his triumphs and accomplishments, past and to come, were but the rich fruitage of years of preparation and clean living? There could be but one result, and that a full measure of success in all that makes a life strong and full of good report. Amid sally and jest from friends, and a tremulous "Good-bye" from mother and sister, the train started for the Golden Gate.

The father, unwilling to say the final word, sought the seclusion of the roaring train that he might have a few last hours with his only son. Then both father and son unburdened their hearts each to the other, and the years of the past were unrolled like a scroll that both might review the hallowed days of the home life. The anxiety of the father for the success of his boy was met by a loving admonition from the son, and the tears of parting were mingled with joyful anticipation of the days to come, when, like a conquering hero, crowned with the victory of success, he would return to his native country and beloved state, to be the staff and comfort to his aging parents! With a lingering handclasp, and a "Good-bye, father," the last mortal words were heard forever.

Then followed days of anxious waiting, until the letters began to come back telling of the honeymoon trip; the strange but interesting experiences in foreign lands and among alien peoples; the new business, with its problems, and the handicaps of a strange tongue and the stranger customs of a curious people; the home-building, with its joyous anticipation of the happy, satisfying days for the wife, and the friends who were already numbered by a score; the enthusiasm of youth and courage, giving all a glow of romance and an edge of zest which only those of red blood and high purpose can command.

And then the cable flashed the staggering news, "——— died today." Oh, it seems impossible, and yet it must be true, for the cold clay that was once the habitation of his ambitious spirit is on its way across the blue waters and green to be buried on the prairies he loved so well, and about which he wrote that he "would like to again smell the soil of the Kansas prairies."

He has been so much in our thoughts since then that his father called him the other day, intending to call his sister, but he answered not, although he seemed to be very near; he must have heard, for he is not now bound by the limitations of the flesh, and we know his life here was such as to assure a higher, fuller life beyond.

It is a great comfort to his parents to think of his brief but eventful life. They never thought him an "angel," for they knew him to be a full-blooded, fun-abounding boy, always ready for adventure and mischief, and they loved him all the more for it. He was fond of sports and athletics—and why not, when his "dad" played baseball and football with him from his early boyhood. His "letters" won in football and basket ball on the "varsity team" for two successive years attest his love for the manly sports.

How blessed are the memories of those days when the honk of the wild goose, the flight of the ducks, the trill of the plover and the whir of the prairie chicken sent father and son to the hunt—not for lust of blood, but because of the sheer joy of living, the interest in the ways of the wild, and the compelling enthusiasm of matching brain against instinct.

But more precious still are the memories of those days in early summer, when he was the companion of the father on those long country drives across the boundless prairies on his mission of relief to the sick. How the unfolding mind sought answer for the shimmering mirage in the distance, the strange and curious "mystic rings" where the toothsome mushroom grew, and where the tragedy of the prairies between wolf and buffalo was fought out so many years ago! It seems as though it were but yesterday when, coming to a place where the beautiful anemones (the "lilies of the field" of our Lord) tossed their lovely white and purple heads to the scented breeze, he, perforce, must stop and pluck great bunches of them for those who were sick and for those of the home, for, loving flowers himself, he thought all others must also care for these gifts of God.

He loved music, too, and that was a heritage from his mother; his service in the High School Glee Club shows that his soul was not "fit for treason, stratagems and spoils." He detested shams and deceit, and always insisted on a "fair show" and "no favors" in a contest. He was a "good sport."

He was diligent in business, and believed that the religion which, in a modest way, he professed, was entirely compatible with a successful career. No finer tribute could be made any business man than that in a letter from the main office reading: "It was upon him that I principally depended to set and maintain satisfying ethical standards and ideals in connection with the conduct of our Chinese business."

He loved his friends, his church and his work, and was never neglectful of any of them. But he has left his friends and the Church Militant for another Friend and the Church Triumphant, where a fuller, larger work awaits him.

American Chemical Society Holds Fifty-Second Annual Meeting at Urbana, Illinois

THE Fifty-second meeting of the American Chemical Society was held at the University of Illinois, Urbana-Champaign, April 18 to 21 inclusive.

In point of attendance this was a record breaking meeting according to Charles L. Parsons, secretary of the society. The prime factor in bringing the Association to Urbana this year was the completion and dedication of the new chemical building of the University of Illinois. While the two closely connected towns of Champaign and Urbana are rather small to accommodate the thousand or more members and guests of the association present it must be said to the credit of the entertainment committee that all who came were comfortably accommodated and that the entertainment and social features were a credit to the local executive, reception and other committees.

Prof. W. A. Noyes opened the convention with an address on the importance at this time of the chemists and chemical industries to the nation. Dr. Edmund J. James, president of the University of Illinois delivered the address of welcome which was responded to by Dr. Charles H. Herty, president of the American Chemical Society.

The papers presented were noteworthy from a point of interest, scientific value and numbers, more papers were in fact, presented than could be read in the limited time allotted to the different sections. The papers of particular interest to the members of the American Food Journal were presented in the section of Agricultural and Food Chemists. Chief among the subjects discussed in this section was the subject of food control from the manufacturing, distributing and law enforcement standpoints. Abstracts of the various papers presented on this subject follow.

In the course of his address before the convention, on the subject, "The Chemist in the Canned Food Industry," W. D. Bigelow, of the National Cannery Laboratory, said:

"The canner, like other manufacturers, sometimes finds it advantageous to have miscellaneous samples examined. The laboratory finds a greater field of usefulness, however, in determining the cause of and finding means of preventing various kinds of spoilage and real and apparent inferiority. This sometimes involves the systematic study of methods of canning in order that the exact technique that will uniformly give the best results may be accurately defined. All this work requires an intimate knowledge of the technology of the industry.

Laboratories frequently make serious errors in answering questions submitted by canners, because of an imperfect knowledge of the facts. Errors of this sort do great damage to the industry and work injury to the chemical profession. Greater care on the part of chemists is urged in such matters."

A. V. H. Mory, of Sears, Roebuck & Co., Chicago, struck a responsive note in his address, "The High Character of Manufactured Foods Today." He said:

In view of a disposition in certain quarters to weaken the confidence of the people in the food they eat, it is thought that a summary showing the character of the foods examined during the past few years in the laboratory of a food distributing house, might be of interest.

To begin with, it should be pointed out that the attitude of the chemist who would safeguard the reputation of his house must of necessity be different from that of the food official who would successfully prosecute violators of the law. The official is under the necessity of proving his case in court which means that very fine distinctions may not ordinarily be taken into account; the food house chemist is seldom justified in overlooking any discrepancy, no matter how small, since he cannot be sure that somewhere in the

country there may not be someone who would take exception to what appears to him to be a very small matter.

With the fact clearly in mind that the examinations made were thorough and the criticisms hair splitting, the following may be of interest:

Out of the 585 samples of miscellaneous manufactured foods analyzed, representing prospective purchases as well as samples taken from stock, there were found, all told, 497 samples, or 85%, which were entirely free from any form of adulteration or misbranding.

Of the 15% of adulterated or misbranded samples about one-sixth or 2.7% of the whole number might be held to be deleterious to health. These possibly deleterious samples represented the following products; flour bleached with nitrous oxides, catsup containing sodium benzoate, junket tablets preserved with boric acid, and dried fruits and gelatine bleached with sulphur dioxide. The rest of the 15% were found wanting for the most part because they gave constants not in full accord with U. S. Department of Agriculture Circular No. 19, though probably not enough out of line to warrant a charge of proved adulteration. There were also a few cases of adulteration involving fraud only.

These 585 samples represent the output of many producers from different parts of the country, and while it must be admitted that in almost every case these producers are well known and reputable, still, since the most of them are also very large producers, their output represents a considerable part of the manufactured food of the country.

The point must not be lost sight of that the above data were mostly obtained from the examination of products known to be more likely to be found deficient. If uniformly frequent examination had been made of all varieties of food products sold, the showing would be many times as good as that indicated by the above figures.

It would thus appear that among manufacturers of food products who are considered reputable, the number of cases representing adulteration and misbranding is very small and the number representing a serious menace to health is practically negligible.

The fact is that for some years past about the only service the laboratory of the distributing house referred to has been able to render, is that of helping the expert buyers to select the best from among a number of perfectly legal and wholesome products submitted for consideration. And this in spite of the fact that evidences of adulteration and misbranding have been carefully and persistently sought.

It is a serious question whether the production of food products has not reached a plane far above that of other lines equally susceptible of sophistication, and approached very near to the point where the criminally inclined, who always have taken and always will take chances in the violation of law, are about the only offenders.

This encouraging state of affairs has plainly come about through our food laws, the enforcement of which has enabled the majority, inclined naturally toward fair dealing, to compete on a higher plane with the less scrupulous minority. Efficient law enforcement has thus found a ready champion in the reputable producer and distributor, whose influence is bound to be favorable to even greater efficiency in law enforcement and to a continued improvement in the character of our food supply.

A paper which drew much favorable comment was that of A. P. Bryant, directing chemist for the Clinton Sugar Refining Co., of Clinton, Iowa. Mr. Bryant's address is given in full:

Laboratory Control in the Manufacture of Corn Starch and Corn Syrup:—In the manufacture of corn starch and corn syrup the process is carried on in such a way as to separate the different constituents of the corn kernel, viz: the germ, bran, gluten and starch, each from the other. The different steps in this separation are purely mechanical, but the control of the process is dependent on the information obtained in the laboratory as the result of a large number of analyses of materials representing different stages or steps of the separation.

It is impracticable to go into a detailed description of the methods of control and tests required, but a few examples will illustrate how the control is secured:

A simple test on the degerminated corn will show whether the separators where the germ is floated and thus removed from the remainder of the corn are working properly on the one hand and whether the degerminating mills are doing their duty on the other hand.

The hull or bran of the corn is sifted out on shakers or reels covered with silk bolting cloth. This bran must be washed as free from starch as possible. There will also be found with the hull a small amount of the more flinty portion of the corn, which even after the long soaking, which the grain gets before entering the mill process will not be ground fine enough to separate the individual granules of starch from each other and the accompanying gluten. A test in the laboratory made on carefully taken and representative samples of the bran will serve to show whether the shaker and reels are doing good work, and, whether the stone mills in which the degerminated corn has been ground, have given the results which should be expected of them.

The separation of the gluten and starch having next been accomplished in the manufacturing process the laboratory must furnish the necessary information regarding the completeness of the separation. Some immature starch grains will of necessity be carried along with the gluten and a trace of gluten will be carried down with the starch. A determination of the starch in gluten and of the gluten in starch gives the necessary information by which the completeness of the operations is determined and adjustment of manufacturing conditions are made accordingly.

The separation of the component parts of the corn kernel having been made under careful control the next step is the manufacture of these into the finished products.

The germ yields corn oil and corn oil cake or corn oil cake meal. A determination of the oil in the cake or meal shows the degree of success attained in the recovery of the oil from the germ.

The gluten and bran together with the concentrated water in which the corn was originally soaked and which contains water soluble matter from the corn, are united to make corn gluten feed, which must be tested not only to see that its moisture content is correct, but that in its content of protein, fat and fibre, it meets the guarantee which has been placed on it, as upon all concentrated feeding stuffs.

Coming next to the starch, the chief constituent of the corn, we find this used either for the manufacture of various preparations of corn starch such as pearl and powdered starch, lump starches, laundry starches, etc., or for the manufacture of dextrins, or for the manufacture of corn syrup and corn sugars. In the manufacture of each of these preparations a certain amount of chemical control is exercised, but it is in the manufacture of corn syrup and corn sugar that the closest supervision is found.

Corn syrup is derived from corn starch by the hydrolysis of from 40 to 50% of the starch with the production of dextrose and maltose, while the remainder of the starch has been split into dextrins.

The hydrolysis is brought about by means of a trace of muriatic acid under pressure and the extent of the chemical change is determined by simple tests applied in the factory, but checked and controlled in the laboratory.

After the change has been brought to the desired point the trace of acid is carefully neutralized by means of carbonate of soda. This neutralization is in a way fool proof for only when neutrality is reached does the liquor "break" and permit of the removal in filter presses of the trace of gluten, oil and pentosans remaining in the starch and dissolved in the hot slightly acid liquor. Neutrality is also controlled by frequent tests as a matter of precaution. The subsequent refining of the syrup over bone black is watched with extreme care and tests are made at frequent intervals. In this way it is possible to avoid trouble due for example to leaky valves or to infection by wild yeast, and to maintain the uniform quality of the finished syrup. As a result of the elaborate refining process and its very careful control, it is safe to say that corn syrup is probably the purest food on the market today.

In the manufacture of different grape sugar preparations the control and refining processes are practically the same as for corn syrup, the only difference being that the hydrolysis of the starch is carried very much further, so that all or nearly all the starch has been changed to grape sugar or dextrose.

In what has been said, mention has been made only of the products recovered, but it is up to the chemist to watch also for losses wherever these might occur. All sewers should be watched to see that no loss of starch or gluten occurs. Tests should be made with alpha-naphthol re-agent to see that there is no entrainment from the vacuum pans in the refinery or that syrup is not getting away through leaky tanks or carelessness.

And finally, there is a vast amount of research work, which calls for the best energies of the chemist. Great advances have been made, but as great or greater lie ahead in the nature of improvement of present products or discovery of new products or application of the old products to new uses. This research work is the most attractive in many respects, but the work done by the routine analyst and the application of the results to the intelligent operation of the plant is by no means the least important.

In an interesting address on the subject of the Chemical Control of Gelatine Manufacture, J. R. Powell of the Armour Soap Works, Chicago, Ill., said:

"This chemical control has been rather limited, until quite recently but when demanded by the advance in food requirements, its installation has proven of value to the manufacturer. This control covers the inspection of raw materials and chemicals, the control of the manufacturing process, and the inspection of the finished product and by-products.

"Raw material is examined for its yields and the presence of interfering impurities. Chemicals are examined chiefly for impurities. Manufacturing processes require such attention as prevent the introduction of impurities and the deterioration of the product. The finished gelatin requires such examination as is necessary to judge its commercial value and its suitability for food purposes."

W. D. Smith of Kansas City, read a paper before the convention on Methods for Clarifying Meat and Meat Extract Solutions for Sugar Determination. The paper follows:

1. Picric Acid. a. Meats. Boil 50 gms. finely divided sample (fairly free from fat) with about 150 cc. water for 15 or 20 minutes, cool, add 1 to 5 gms. picric acid (solid) and 15 to 20 cc. of 20 per cent aqueous solution of phosphotungstic acid, and make to 250 cc., exclusive of fat. Filter and take 150 cc. of filtrate. Make to 160 cc. with 8 cc. concentrated HCl and 2 cc. water, mix, and filter. The filtrate in each case should be clear but yellow from picric acid in solution. Determine reducing sugar at once, 20 cc. of solution being assumed to contain 3.75 gram sample. Invert and determine total reducing sugars.

b. Meat Extracts. Dissolve 5 gms. meat extract in about 25 cc. of water, add 1/3 to 5 gms. solid picric acid and 25 cc. of a 20 per cent aqueous solution of phosphotungstic

acid. Mix and make to 100 cc. Filter, take 60 cc. (or more of filtrate, add 3 cc. (or more if necessary) concentrated HCl, make to 66 cc. and filter quickly. The filtrate should be perfectly clear, but will have a light yellow color due to picric acid in solution. Determine reducing sugar in the filtrate at once. 20 cc. equal to 0.909 gms. sample.

Take another portion of the filtrate and invert according to one of the methods on page 41, Bull. 107, Bureau of Chemistry. Determine invert sugar.

2. Mercuric Acetate. a. Meats. Boil 40 gms. sample (fairly free from fat with 150 cc. water 15 or 20 minutes; cool, add 10-20 cc. twice-normal mercuric acetate (slightly acid with acetic acid), then add strong sodium hydroxid with care until nearly neutral to phenolphthalein, and make to 200 cc. exclusive of fat. Filter through a large folder filter as quickly as possible. Take 120 cc. of the filtrate, add 2 cc. glacial acetic acid, and saturate with H₂S in the cold. Remove excess of H₂S with a current of air, and restore volume to 120 cc. Filter, take 80 cc., add 5 cc. (or an excess of 20 per cent aqueous phosphotungstic acid and 5 cc. concentrated HCl, and make to 100 cc. Filter and determine dextrose at once. 20 cc. of filtrate equal 3.20 gms. sample.

Invert another portion of filtrate according to page 41, Bull. 107, Bureau of Chemistry, revised, and determine total reducing sugars.

b. Meat Extracts. Dissolve 5 gms. extract in 100 cc. water, add about 35 cc. mercuric acetate solution, and proceed as with meats. 10 cc. of phosphotungstic acid solution should be used instead of five. 20 cc. of final filtrate before inversion contains 400 mgs. of sample.

II, Reduction of Fehling's Solution. The details of the copper reduction adopted are as follows:

Bertrand's solutions consist (1) 40 gms. copper sulfate to the liter, and (2) 200 gms. Rochelle salts and 150 gms. sodium hydroxid to the liter.

20 cc. sample are neutralized and 40 cc. Bertrand's mixed solution added in a 120 to 150 cc. Erlenmeyer flask, heated rather quickly to boiling, then boiled gently for three minutes. The copper is allowed to settle for an instant, then the solution filtered off through an alundum or Gooch crucible, not too rapidly, and washed with water. The copper is determined by Low's method, Bull. 107, Bureau of Chemistry, p. 241, and sugar equivalent taken from Bertrand's table.

¹For strictly pure beef extract, larger quantities may be required.

L. M. Tolman, of the U. S. Department of Agriculture, Chicago, delivered a paper on "A Study of American Beers and Ales," which follows:

"This work was undertaken in connection with the enforcement of the Food and Drugs Act, for obtaining information as to the composition of brewery products made in this country. It was undertaken for the reason that practically all of the existing data were on foreign beers.

"The investigation was carried out by going into several large breweries, and setting up a careful control over the products so that when the finished beers were ready for the market, complete information was had as to the kind of raw material which was used and the method of production.

"Tables were given showing the changes taking place during the fermentation of worts made from barley malt, from barley malt and rice, from barley malt and corn, and mixtures of barley malt, corn and sugar.

"The products thus studied covered the various types of beers, ales, porters and stouts.

"From the results of the examinations of these beers it is found that a rather clear line could be drawn between beers made from barley malt and those made from barley malt with corn or rice or sugar. The principal difference is found to be in the ash, protein and phosphoric acid.

"In addition to the samples of beers made at the breweries,

samples of all malt beers were collected from all over the country, showing the various types of malt beers, also commercial beers containing varying percentages of rice or corn.

"The conclusions reached were as follows:

"*First*—That the all-malt beers made in this country contain higher percentages of protein than the all-malt beers made in Europe, due to the use in this country of a barley high in protein.

"*Second*—That the use of rice, corn, or corn products and sugar as substitutes for malt, reduces the contents of protein, ash and phosphoric acid in the finished beer.

"*Third*—That this difference, as regards the protein, ash and phosphoric acid is sufficient to enable the ready separation of the all-malt beers made in this country from those containing the commercial mixtures of rice and corn and sugar.

"*Fourth*—That it is necessary to calculate the analytical results to the basis of a common wort in order to accurately interpret the results of analysis."

Of considerable interest to the visiting chemists was an exhibition of chemical products and apparatus in the basement of the new chemistry building. Particularly enjoyable also was the excursion to Danville, Ill. On this excursion visits were made to the Hegeler Zinc, Smelter and Sulphuric Acid Works, the Carbon Hill Strip Mine of the Two Rivers Coal Co., and a large window glass manufacturing works. The visitors were sumptuously entertained at luncheon by the Danville Chamber of Commerce.

A large number of chemists interested in foods were present at the convention among whom may be mentioned Dr. I. K. Phelps, Chief of the Food Division, United States Department of Agriculture, Washington, D. C., Prof. H. E. Barnard, Food Commissioner of Indiana, Dr. Cook, former food commissioner and chemist of South Dakota, Dr. H. S. Grindley of the University of Illinois, Dr. J. H. Long, former member of the Referee Board of the United States Department of Agriculture, Dr. F. L. Dunlap, formerly of the Bureau of Chemistry, United States Department of Agriculture, Drs. Bryan, Fisher and Chittick former chemists of Illinois, Wisconsin and Iowa.

The next meeting of the American Chemical Society will be held in New York in September, 1916.

Bringing authentic news of the salmon pack in the Bristol Bay, Alaska, district, the Alaska Portland Packers' Association steamer Akutan arrived recently at Astoria, Ore., from the Nushagak river. Superintendent Daley, who returned on the Akutan, says on the Nushagak a full pack was put up, but on the Koggiung and Naknek rivers the output is approximately 50 per cent short. The weather during the entire season was exceptionally pleasant, and the schools of fish stayed in Bristol Bay instead of entering the river. The fishermen were compelled to do a good portion of fishing outside.

H. E. Barnard, Indiana state food and drug commissioner, notified all restaurant and dining hall owners and all standholders at the state fair grounds that they must obey the food and sanitary laws of the state or he will close their places of business. He made the rounds of the fair ground recently and made the situation plain to the keepers of these places. "We shall have a number of inspectors at the state fair throughout the week," said Mr. Barnard, "and they will look after the enforcement of the food and sanitary laws. I believe the restaurant keepers and standholders mean to comply with the orders and to obey the law without any trouble, but any one of them found violating the law or violating any order that is given them will be closed up at once. There have been times in the past when sanitary conditions in some of the restaurants and dining halls were frightful, but there will be no more of it. These people displayed a wish to aid us in enforcing the law, and I believe everything will be all right."

Quaker Oats Co. Wins in Dissolution Suit

A LEGAL victory of tremendous significance was won by the Quaker Oats Co. on April 21, when this company together with the Great Western Cereal Co. and Joy Morton, were declared by the United States District Court in Chicago not to be violators of the Sherman law, as was charged in the suit brought against them by the Government. It was specifically charged by the Government that the defendants were a monopoly or were attempting to monopolize the oatmeal trade in the United States. Voluminous testimony was taken by both the Government and the Quaker Oats Co. in many parts of the United States, particularly among wholesale grocers.

The hearing began on April 19 and the decision of the court was handed down on April 21, a remarkable record for expeditiousness in judicial action. The opinions of Judges Baker, Mack and Alschuler, who sat on the case, follow in the order named and will be of great interest to readers of this publication:

Judge Baker: The clerk is directed by the court to enter a decree dismissing the bill for want of equity.

This cause has been brought here under the Expediting Act. The members of the court have deemed it well to enter the decree at once without undertaking to prepare and use the time and create the delay that would be created by making any written findings of fact and conclusions of law. The decree is entered upon the votes of Judge Mack and myself in favor of that decree, and against the vote of Judge Alschuler, who thinks there should be a decree for the complainant, the petitioner.

I will state very briefly my view of the facts and law of the case. At the conclusion, the situation remained, as it appeared to me, upon the Government's own statement of what it claimed as the situation with respect to the evidence, and on the Government's statement of its views of the law. So far as my own disposition of the case is concerned, I was ready to dismiss the bill upon the Government's own showing, because, under Section 1, there must be a contract, combination or conspiracy in existence, in present force at the time the bill is filed. Contract, combination or conspiracy. The collocation of the words of course, is influential under familiar canons of statutory interpretation in coloring and restricting each of the words. In short, necessarily, they are all of the same genus.

Now, when the Government admitted, for it was compelled to admit that there was no cause of action against Morton or the Great Western Cereal Company when the bill was filed, there could be nothing except a decree of dismissal against all defendants under Section 1. If three men, for example, are indicted for conspiracy to ruin a bank, and the evidence shows that "A" had the intent to ruin the bank and was performing acts to ruin the bank, and the evidence also shows that there was no conspiracy on the part of "B" and "C" then, of course, there would have to be a directed verdict in favor of all the defendants, because one man can't be guilty of conspiracy. One man, or one institution, however, may be guilty of creating a monopoly, and so legally the existence of any case here would be dependent upon a violation of Section 2. Without reviewing the evidence, to my mind it is clear that the finding of fact should be that there was no monopoly in fact. Of course, if there is a monopoly in fact—monopoly by its terms implies a very inherent thought, to my mind it indicates an exclusion of others. Now, of course, if there is an exclusion, a taking unto one's self, so that completely, or so far nearly completed that it is perfect, a monopoly is created, then the intent is wholly immaterial. It would be the fact of monopoly that would be determinative and not the purposes or intent of the people creating the monopoly. If no monopoly exists there may still be an offense to which the remedies, civil, injunctive remedies of the statute may be appropriate, if

there are acts that constitute an attempt to create a monopoly. But in the matter of attempt, to my mind, the element of intent becomes essential. And so, when I gathered from the Government's own case, that there was, say, three defendants, A, B and C, and there was at the time of the filing of the petition nothing chargeable against B and C, there couldn't be anything chargeable against A on the ground of conduct, combination or conspiracy, which, to my mind, requires the act of more than one person. And when it became apparent that the Government was not claiming any monopoly in fact, but only a potentiality, that there could be no finding under Section 2 on monopoly in fact. Attempted monopoly brings in the question of the intent, that is, looking over to see how and why everything was done, and in that respect nothing was claimed. Therefore, it appeared to me that the Government had not made its case.

Judge Mack: I feel it is my duty, under the circumstances of the division of opinion in the court, to express my personal views in concurrence with Judge Baker, possibly in some slight respects differing from the reasons which led him to the conclusion to which both of us agree.

I would say in the first place, that the bill of course is very much broader and may well have justified the enormous expenditure of time and money that has occurred in this case—very much broader than the claim made on the oral hearing by the Government. If the bill has charged only what the Government now charges, and had sought only the relief that the Government now seeks, I take it that the case would have been ready for hearing in a comparatively short time and with a very much less expenditure. I say this, of course, not in any way as a criticism of the bill or of the methods pursued, but as one of the reasons which it seems to me relieves the court of what might otherwise be its duty, of a careful and thorough examination of the enormous record that has been presented here.

Then, in the second place, I believe the eminent representative of the Government, Mr. Fitts, was under some misapprehension as to the reason for calling on him after his associate had made a statement of the facts. This is a hearing in the court of original jurisprudence, and I personally felt it the duty of the representatives of the Government, the plaintiff in the case, to present in the opening statement not merely their version of the evidence, but also their view of the law itself, both for the enlightenment of the court and in accordance with the practice that prevails in this state, in order to give opposing counsel the opportunity to answer, and thereby avoid a response after the Government's counsel had answered the defendants' contention. It was for that reason, for the purpose of having the Government's views, both as to the law and the facts, fully presented that I desired to hear from Mr. Fitts before hearing from the defense.

I agree, however, with Judge Baker, that personally, after the Government had fully presented its case, it seems to me that neither by the facts nor under the law were the contentions of the Government established. While the views expressed by Judge Baker as to the meaning of the word "combination" are supported both by the collocation, the phrase being contract, combination or conspiracy, and by the general use of the word at the time the act was passed, still it may well be, and it is unnecessary now for me to express my personal opinion on the question—it may well be that the word "combination" has a much broader significance, and I should assume that the contention of the Government is entirely sound. I don't mean to express any personal dissent about it. But that there may be within Section 1 a combination not of the persons, but a combination of the instrumentalities of com-

merce, and that when one man combines within his ownership competing instrumentalities of commerce, with the intent, or with the effect thereby, unduly to restrain trade, and that ownership continues, that the combination continues, and that such combination may be enjoined. If that be the correct definition of combination, then, of course, the purchase by one dealer in rolled oats of any part of the business, or any of the instrumentalities of the business of the other dealer in rolled oats, is a combination. And, beyond all question, all combinations restrain trade. But the question is whether it is an undue restraint of trade, and that depends upon the entire situation, the nature of the business, the competing elements throughout the region of interstate commerce, and the possibilities of future competition.

Furthermore, and without expressing an opinion now as between the majority and the dissenting Judge, in the Harvester case, inasmuch as that is now pending in the Supreme Court, and again, without indicating any personal dissent, assuming that the majority in the Harvester case is absolutely in entire right; assuming, further, that both an undue restraint of competition and a monopolization in business may arise where the situation is such that without any wrongful acts of any kind one man or one company has it within his power by reason of the combination or by reason of the transactions which led to the existence of that power, that one man has it within his power unduly to restrain competition or to monopolize the interstate commerce in an article, I fail entirely to find on the facts as presented by the Government supplemented by the presentation of the defendants, either an actual monopoly or that power which will, in view of the entire situation in the rolled oats business, and does tend to show the existence of the possibility of monopolizing or unduly restraining the trade in rolled oats. Because, it seems to me, that the subject matter is not Quaker Oats and Mother's Oats but Rolled Oats. Assuming even that it is not rolled oats but package rolled oats, rolled oats as sold by the trade throughout the country in packages for retail consumption, that being the largely prevailing method of conducting the business, there is on the facts to my mind no undue restriction of the competition, and not in the slightest degree monopolization of the product or of the business. And that, because of this, that while the Quaker Oats Company and The Great Western Cereal Company were the two largest factors in the business, there were numerous competitors and there was the fullest possibility of the most extended competition, and the size and the power of neither of these companies, either singly or combined—the power of the Quaker Oats Company after securing the Mother's Oats was not such as could prevent the most unlimited competition in package rolled oats. The strength of both of these companies was due to the tremendous advertising of their brands. By virtue of that advertising the public has come to demand not mere rolled oats, not package rolled oats, but Quaker Rolled Oats or Mother's Rolled Oats. And yet the instrumentalities of satisfying the demands of the public, the wholesale business throughout the country, the retail business throughout the country, was all in most strenuous opposition and competition with these two companies. The very elements that they necessarily utilized in the distribution of their product were their own chief competitors. I don't speak now of the fact that the business admittedly was in all respects legitimately conducted, that is not determinative.

I agree entirely with the Government that a potential monopoly that has failed to exercise its tremendous power and has become and has been a very good trust, is none the less subject to law. But we must first find the undue restraint of competition or the probability or possibility thereof. The very fact that the subject matter of the competition in rolled oats was a product manufactured without the slightest difficulty, without the slightest hindrance by reason of any patents either in the product or in the machinery for manufacture, from a raw material of which the supply for all practical purposes was

absolutely unlimited, to be had in all parts of the country, a supply of which the rolled oats represents maybe one or two per cent, indicates that with very small capital, as testified to here \$25,000 to start a small mill, \$65,000 to start a five hundred barrel capacity, anybody could go into that business. Now, it is true that anybody that went into the business and attempted to sell to the public package rolled oats would run up against the tremendous advertising power, against the tremendous advertising value of Quaker Oats and Mother's Oats. But competition that could be established and that has been established and that has existed all along is none the less real. The fact that one of the competitors, or two of the competitors, or one competitor combining the two competitors, has acquired a preponderance in the business of the package rolled oats, due to the tremendous importance of advertising, to my mind does not show that thereby there has been any undue restriction of competition. In no sense has the competition been restricted as far as I am able to comprehend by a union of Mother's Oats and Quaker Oats as against the rest of the world. It is true that by the combination of ownership there may be a restriction of the competition between two brands of rolled oats, Quaker Oats and Mother's Oats, but there is no restriction, no country wide restriction of the competition and no possibility thereby of creating a country wide restriction of competition in rolled oats or in package rolled oats. Every wholesaler in the country is competing and competing hard, and as far as the evidence presented to us shows competing successfully in the package trade. It is true that the Quaker Oats Company is prospering tremendously notwithstanding this competition, but that is due to its past, present and continuing advertising. If that advertising is causing misapprehension on the part of the public, there are other remedies to correct that misapprehension. If the Quaker Oats Company is falsely asserting its claims there are other methods of correcting these false statements. I don't for a moment say it is, I merely assume that possibility.

Now, the Government has urged that the real wrong is in the combination of these advertised brands in one hand. The contract which effectuated that combination is a legal one. While on the facts presented it seems clear that the Quaker Oats Company did not go out with any intent to destroy the Great Western, to buy it off; while it seems clear that the Great Western was anxious to sell out because of its actual insolvent condition, I don't think that that affects the question either under Section 1 or under the monopolization laws of Section 2. The intent with which the Quaker Oats Company purchased Mother's Oats would be important in the consideration of a violation of the prohibition against attempting to monopolize.

So that for the purposes of this case, for the purposes of consideration of the violation of Section 1 and of the question of the fact of monopoly, it seems to me immaterial whether the Great Western came to the Quaker Oats or whether the Quaker Oats went to the Great Western. It seems to me entirely immaterial, even if the Quaker Oats went to the Great Western Cereal Company for the very purpose of acquiring Mother's Oats and thereby lessening the competition. Every purchase between two people in the same business, one buying out the other, is necessarily a lessening of the competition, and as long as the product is such that the fullest opportunity for country wide competition exists, the field being open to everybody with even a small capital, there being no patent rights, there being no other hindrances to the freest development of individual enterprise, I fail to see anything undue, anything unreasonable in the restriction of competition that results, although it be the largest of the several competing firms that buys out the second largest. For that reason I concur in the order dismissing the bill.

Judge Alschuler: I cannot concur in the decision or in some of the reasoning of the majority of the court; whereby that conclusion is reached. It was deemed wise by the court to expedite this case by announcing a decision as soon as it had been reached, without waiting for

the ordinarily longer process of preparing written opinions, and hence the announcement of the opinion today as being deemed the wise and proper thing to do.

At the time of the purchase of which the Government complains, of the total rolled oats output in and for the United States, entering interstate commerce, The Quaker Oats Company had, roughly speaking, 55 per cent, the Western between 15 and 20 per cent, and the remainder stood in various proportions between something over a dozen others who were in the same business, the largest of them quite small in comparison with the Western. About half The Quaker output was of package goods under the advertised brand of Quaker Oats, and a much larger proportion of the Western product was put out under the advertised brand of Mother's Oats. Competition in the market between these brands was keen. Quaker had lost some ground in 1910 and 1911 and Mother's had rapidly gained in volume. Quaker showed large profits while Western was running behind financially. There is not much evidence as to the cause for the loss of the latter, but to my mind this is quite immaterial to the issue here involved.

The two companies themselves were composed of various units which had theretofore been brought together, the manner whereof could not be related in small compass, but suffice to say that even if, as is claimed by the Government, this was in some respect obnoxious to the law, these long existing associations and combinations culminating in these two major companies here involved are not attached to the bill, but it is sought only to affect thereby the contract of June 22, 1911, under which The Quaker acquired certain properties of the Western.

Without reciting details or conditions and negotiations leading to the contract, it seems clear to me that both parties to it contemplated that The Great Western should permanently withdraw from participation in the oatmeal manufacture. This is strenuously denied by the defendants, but it seems to me that the circumstances to which I will refer very briefly could lead to no other conclusion than that this was the purpose and the intent of the transaction.

The resolution adopted by the Western distinctly sets out this purpose in reciting that in the judgment of the board of directors it is for the best interests of the company to discontinue the manufacture of oatmeal and rolled oats and crushed oats. The defendants contended that that was but a form that was adopted to assure the trustee of the mortgage that it would have the power—the mortgage which recites the real estate to be conveyed, that it would have the power under the clauses of the trust deed or mortgage to make conveyance of property that was no longer useful to the company. But the contract itself seems, to my mind, to dispel all doubt upon that subject. It provides primarily for the conveyance of two plants of the Western, one at Joliet and one at Fort Dodge, but not several other plants which it possessed. After providing for the conveyance of these two plants, and for all of the property contained therein, it is provided in the contract, in the fifth section of it, all and singular the business, good will, contracts for sale, formulas, processes, trade secrets, copyrights, trademarks, trade rights, trade names, trade insignia, both registered and unregistered, and all registrations and certificates of registration at home and abroad, of any of said trademarks, trade names and trade insignia, relating to, or in any way connected, or associated with the manufacturing, putting up, packaging and sale of oatmeal, rolled oats, crushed oats and commercial mixed feeds, owned, possessed, controlled or claimed by the party of the first part, The Western. This, regardless of where the property existed or in connection with which the rights or trademarks were exercised and held and the good will existed of the Western. It includes all its good will and all its trademarks with reference to all its oatmeal trade, whether of these two mills specifically conveyed, or any other of the various mills which were thereafter carrying on the business and man-

ufacturing rolled oats or oatmeal which is for the purposes of this case treated as the same.

And in Clause 7, the party of the first part, The Western, covenants and agrees to and with the party of the second part, and so forth, that it will at once turn over and deliver to it complete enjoyment of the said business and good will with which the trademarks are connected, that is of the entire oatmeal business that it then had. And also after describing some of the personal property and the two specific properties conveyed, a general description of their labels and boxes and cartons, and oats and so forth, in any of its properties. And in the eleventh section it is provided that for the same consideration which is stated in the instrument to be \$10.00 and other good consideration, but which, in fact, for these properties and good will was a little over a million dollars. It is stated this is the consideration for which the machinery, engine and so forth, at Will County, Joliet, and Fort Dodge,—includes also the good will, trademarks, names, rights of all of said business, which are assigned and transferred, has been included and paid to the party of the second part in connection with the sale and conveyance from the party of the first part of these specifically named properties.

And Section 14 provides, the first part of it, undertakes and agrees to turn over all contracts for the products, of the good will, trademarks for the oatmeal business, and a list of all customers which the first party has in the oatmeal business, said list attached to the contracts.

Included in the sale was also for another consideration, being the appraised price thereof, all of the oatmeal, all of the materials for the manufacturing of the oatmeal products, and all of the brands including always particularly the Mother's Oats brand, but this special consideration being for all of the actual oat products, oat materials, for the manufacturing of products in all of the mills and plants of the Western, not alone those in Joliet and Fort Dodge, the present price for which materials was upwards of four hundred thousand dollars, which was paid for these materials. All of which, to my mind, manifests an intention and practically an agreement by the conveyance of the good will and the turning over of its customers and contracts and of its materials for producing this product,—manifests an intention on the part of the one to retire and on the part of the purchaser that the seller shall retire from the business of manufacturing and putting out rolled oats.

The controlling facts seem to me to be that the Quaker Oats Company already through its domination of the major part of the entire output in this advantageous position took over the property of its largest competitor, whereupon the latter, through its remaining mills, ceased longer to be a factor in the oatmeal trade.

That as the result of this acquisition, the Quaker Oats Company did or could materially affect or control the raw product, the oats, is not reasonable, to suppose. That competition in the bulk goods has not been appreciably affected since the contract, may fairly be said to be established by the evidence. That by the added power of the Quaker Oats Company, through its elimination of this, its most potent competitor, it was in a position to seriously affect competition through price manipulation of such goods, and other actions which might well go with such power seems to be self-evident. Although, as was testified, fifty thousand dollars might build a good sized mill, the existence of this powerful, bigger unit would be a strong deterrent to such an undertaking.

But the transaction did remove the strong competition theretofore existing between Quaker Oats and Mother's Oats brand, in each of which the respective companies have theretofore built up a vast trade, a trade which, in that class of goods, was by far the great majority of all the trade in that class of goods, the advertised goods, in the country. And this is but another way, to my mind, of stating the contract in question was a combination because in my judgment that was the very purpose and object of the contract. It is not tenable to say that in this

transfer of trademarks, brands and good will, there was manifested no intent or tendency to monopolize the trade in the product. The trademarks and brands constituted the effective instrumentalities whereby a great trade was built up, and that there was real competition in these advertised goods would appear not alone in the very nature of things, but in the fact that as a probable result the Quaker Oats brand output had somewhat declined while Mother's Oats was rapidly on the increase. True, the price of Quaker Oats package goods had not been increased, but this is not essential to the establishment of the existence of the monopoly or restriction of trade, if it had thereby better secured itself against successful competitive attack. The tendency to monopolize is plain and the law may be thereby transgressed and in my judgment has been under the circumstances here shown.

If the competition in package goods had been maintained, The Quaker might have been obliged to lower the price or do something else disadvantageously to itself in order to maintain its supremacy. To say that people may obtain the unadvertised or bulk product, which is equally good, at much lower prices seems to me to be beside the question. It is not for the courts to tell the people what they may or shall buy. If these companies have exploited their brands so successfully that the people by hundreds of thousands have been induced to believe they possess superior virtues, and thereby the companies respectively have established this vast package trade in these goods in which some way they combine or one sells out to the other for the advantage thereby accruing and in such way as to unduly restrict trade and promote monopoly in this product, they ought not in defense of their conduct to be heard to say that if the people did not like it they may get goods of other brands or without any brand at all.

The mere fact that a great trade has been acquired in particular goods through advertising, does not affect the proposition. In fact, the two concerns may each by advertising, by judicious and successful advertising, secure a vast trade equal to far more than the major part of it, does not of itself authorize them to combine their efforts in such a way so that thereby a practical monopoly of the two products is secured to one of them.

It is to the credit of the company that it does not appear to have resorted to those coercive and terrorizing expedients for increasing and maintaining its trade so often found to be the fact where a given trade or business establishment has obtained the comparative strength and power of this one. But in my judgment this does not obviate the apparent undue restraint of or attempted undue restraint of trade which this contract seems to me to manifest.

There was for the defendants evidence to the effect that the real thing which was the subject of the purchase was the brands, trademarks and good will of the Western in the oatmeal trade, and that the tangible property was taken only as an incident because deemed essential to secure title to the brands, and so forth. If for this million or so of consideration, the Quaker Oats obtained oats and machinery and real estate and other facilities for maintaining or enlarging its business and plant, things which might be purchased elsewhere, it might with better grace maintain that there was nothing in the transaction that tended to destroy competition and create monopoly. What did it buy for its million dollars of investment? It is clear to me that it purchased the business extinction in the oatmeal trade and the commercial status of its greatest and most powerful rival, thus strengthening the purchasers' already strong grasp upon the entire industry through the added force of this very considerable unit thus joined with its own. To my mind, this of itself, quite regardless of the manner in which this enlarged power has been exercised in the interim between the contract and the filing of the bill, manifests such an undue restraint of interstate trade and commerce thereby affected and of the purpose and tendency to create monopoly as fairly comes within the combination of the

statute which denounces not growth nor strength, nor power, but only combinations and devices by whatever form that appear calculated and tending unduly to restrict interstate trade and commerce or eliminate competition and produce monopoly.

Entertaining these views, I believe there should be a decree for the Government, the precise scope of which, under the circumstances, it is hardly necessary for me to discuss.

Judge Baker: This concludes the case unless there are some steps in the way of appeal to be taken at this time.

Mr. Fitts: If the court please, the United States gives notice, of course, of an appeal, and in due time, and in the time fixed by the law, will perfect it in the way provided to the Government in such cases.

**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED
BY THE ACT OF CONGRESS OF
AUGUST 24, 1912,**

Of The American Food Journal, published monthly at Chicago, Ill., for April 1, 1916.

State of Illinois, County of Cook—ss.:

Before me, a notary public in and for the State and county aforesaid, personally appeared Herman B. Meyers, who, having been duly sworn according to law, deposes and says that he is the publisher and owner of the American Food Journal, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business managers are:

Publisher, Herman B. Meyers, 15 S. Market St.

Editor, Chambers Jeffrey Deprand, 15 S. Market st.

Managing Editor, Herman B. Meyers, 15 S. Market St.

Business Manager, Herman B. Meyers, 15 S. Market St.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.)

The American Food Journal, Inc.

Herman B. Meyers, Winnetka, Ill.

Frances Etta Meyers, Winnetka, Ill.

John Dill Robertson, M. D., 1404 W. Monroe St., Chicago.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

There are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

HERMAN B. MEYERS.

(Signature of editor, publisher, business manager, or owner.)

Sworn to and subscribed before me this 25th day of March, 1916.

(Seal)

H. L. SPENCER.

(My commission expires October, 1919.)

At least 25 per cent of the larch timber over large areas in eastern Oregon has been killed or weakened by mistletoe, and the forest service is taking steps to combat the pest.

Calumet Indian Seized in North Dakota— Old Chief White-of-Egg Lands in Clutches of Commissioner Ladd — Forerunner of Bureau of Chemistry Rul- ing?—Case to the Courts

TO the uncompromising attitude of Professor E. F. Ladd, Food Commissioner of North Dakota, who has refused to countenance white of egg as anything but a superfluous and deceptive ingredient when used in baking powder, is due credit for the action undertaken April 14, against Calumet Baking Powder at Fargo, N. D.

Whether ingredients can be put into foods sold in North Dakota that are not necessary in preparing these foods or beverages and which at the same time are harmless but which tend to make the food or beverage appear better than it really is, will soon be tested out.

The action was brought by Food Commissioner E. F. Ladd, president of the North Dakota Agricultural college and head of the chemical department of that institution, through State's Attorney A. W. Fowler. A quantity of six cans of the baking powder was seized at one of the Fargo grocery stores and at the same time a petition was filed with the clerk of the district court praying that tribunal to render judgment condemning the product and ordering it disposed of according to law.

The case has been hanging fire for some time while Dr. Ladd took the matter up with the legal authorities of the state. Attorney General Henry J. Linde gave his opinion that the use of a small amount of albumen in Calumet baking powder was not in violation of the state laws, but other legal authorities render opinions at variance and Commissioner Ladd has decided to test the law out in the courts.

It is the contention of Commissioner Ladd that the adding of a small amount of albumen to the baking powder in question is done for fraudulent purposes by making it appear that the powder is of a better quality than other powders not containing the albumen. He claims that this albumen is not necessary to the powder and, while not being injurious, has no effect on the operation of the powder in the process of baking. He claims that it is a fraud in that a small quantity of baking powder containing albumen when placed in a glass of water appears to the user or purchaser as being stronger than other powders of equal strength without the albumen. When the powder is mixed with water the albumen forms a film over the surface of the water thus retaining for a short time the gases formed by the action of the powder with the water, thus making it rise up and appear to be creating more gases than in powder where there is no albumen and the gases are allowed to escape into the air during the process of the test.

The action in this case is based on chapter 200 of the session laws of North Dakota for 1915, the petition reading in part as follows:

"That said baking powder is being so kept and offered for sale in violation of the provisions of chapter 200 of the session laws of North Dakota, for the year 1915 in this, that all of said baking powder is a manufactured food product which contains as an ingredient thereof a quantity of albumen and which albumen has been added to and mixed with said baking powder in the process of manufacture thereof so as to deceive the users and purchasers of said baking powder as to the true

quality thereof and so as to cause the said baking powder to appear to be superior to and different from its real qualities, said albumen so added to said baking powder not being a dye, flavoring or preservative and was so added to said baking powder for the sole purpose of deception as aforesaid."

The portion of chapter 200 of the session laws of 1915 upon which this case is based is principally the last half of the third paragraph, which reads as follows:

" * * * Or if any substance or substances other than dyes, flavoring or preservatives permitted by this act have been added to it which deceives or tends to deceive the user or purchaser as to the true qualities of the article or beverage, or which cause the article or beverage to appear to be superior to or different from its real qualities" it is to be deemed in violation of the laws.

Coming at this time, the action of Commissioner Ladd seems of peculiar significance. Albumen baking powder has for some time past been in the balance before the Joint Committee on Definitions and Standards, which body held a hearing in Washington, D. C., January 14 and 15, for the purpose of determining what should constitute a proper definition or standard for baking powder.

At that time it was shown beyond any question of doubt, that white of egg in baking powder serves absolutely no other purpose than to mislead and deceive the uninformed and gullible.

While the decision of the Joint Committee has not as yet been rendered, it has been pointed out, not without a sense of logic, that the action of Commissioner Ladd, who is himself a member of the Joint Committee on Definitions and Standards, is but a precursor of the Committee's own announcement.

If this be the case, albumen is nearing the end of the way. In all events, it is but a matter of time. There is an end to reprieves. Self-respecting dealers have long since sickened of the clownish exhibition known as the water-glass test. It has come to be its own condemnation. Food commissioners and others interested in control work have wearied of the joke, which has grown flat and stale.

Give the people a baking powder that will do the work intended for it. If you are selling magic go on the stage—that's where they need you. Yes, sir, if you can do the rabbit trick, the handcuff feat, or if you yearn to show an admiring audience what legerdemain has enabled you to do with two little tumblers, a squirt of water and a speck of dried hen fruit, then join the ranks of the "hams" and insist on the recognition to which an "artist" stands entitled. That's the idea. Be what you are. Be yourself! Amuse the people, but do it as a "ham."

Professor E. F. Ladd, Food Commissioner of North Dakota and President of the North Dakota Agricultural College, suffered a severe attack of acute indigestion recently. THE AMERICAN FOOD JOURNAL is glad to announce that he is now well upon the way to recovery.



Notes from Field of Food Control



“WHERE can I get good butter?” is the despairing cry of the housewife in Michigan, says Commissioner James W. Helme of Michigan. She goes to market and sees tub after tub of butter labeled “Elgin” “Creamery,” “Extras,” etc., and buys some that in forty-eight hours has a billy goat beat for odor.

Much good butter is made in Michigan. It is shipped to New York and Philadelphia. Much poor butter is made in Michigan. It is sold in Michigan for two reasons: First, because other states won't take it except at a very low price. Second, because the dealer can sell this butter a cent or two cheaper than good butter and make a bigger margin on it besides. Much butter now on sale in Michigan is creamery butter placed in cold storage in Chicago last summer. Chicago now sells it at 27c and it is retailed here at 37c. Cold storage butter six months old is not long for this world after being taken out. For developing flavors that will paralyze a skunk, cold storage butter has cold storage eggs beat a mile.

The last legislature authorized the State Dairy & Food Department to establish a State Brand for butter. Before any creamery can sell butter under the State Brand, the creamery must make a grade of butter that will uniformly sell in the New York market as “Extras.” To bring this about our three expert buttermakers visit a creamery, inspect and regulate its methods, insist on clean factories and clean dairies supplying it, and instruct and educate the butter makers and farmers how to obtain a clean, healthful, uniform product. They put in several weeks at each factory. By January 1st we shall have enough factories up to the standard of “Extras” to put out the State Brand. This brand will guarantee the buyer an extra quality of butter. If a factory lowers the quality of its product, the State Brand will be taken away. We will then establish selling agencies over the State to sell “State Brand Butter.” In the meantime parties who wish to buy an extra grade of butter will be furnished the names of creameries that are now producing such goods by writing to the State Dairy & Food Department, Lansing, Mich.

Public notice is hereby given that the Illinois State Food Standard Commission announces public hearings in relation to the use of Corn Syrup (glucose) in the manufacture of jellies, jams, preserves, etc. These hearings will be held in June, 1916. The exact dates will be published later. W. Scott Mathews; Dr. Walter S. Haines; Thomas P. Sullivan.

The Everett bill, designed to require baking powder manufacturers to label the cans with the amount of leavening power the powder contains was passed by the New York Assembly recently 77 to 31. The bill also would require that all of the ingredients in the mixture be plainly marked on the cans. Violations of the proposed law would be punished by a fine of \$50.

Violation of the pure food and drug act is charged against the Great Eastern Tea and Coffee Company of St. Louis, in an information issued by the United States district attorney's office. It is alleged in the information that the company shipped a consignment, labeled “black pepper, strictly pure and free from adulteration,” when in fact, it is alleged, the commodity was adulterated with ground pepper shells.

FAREWELL DINNER TO LOOMIS.

Employees of the Food Inspection Service of the Bureau of Chemistry gave a farewell dinner to H. M. Loomis, chief of the division, at the Ebbitt recently.

Mr. Loomis is leaving Washington to take charge of the inspection service of the sardine industry under the National Cannery Association.

POTATO IMPORTS FROM CANADA.

The Secretary of Agriculture has authorized the granting

of permits to import potatoes from Canada, subject to the new regulations which became effective January 1, and the Canadian Government has officially accepted the conditions and issued an order that potatoes offered for export to the United States must be free from injurious diseases and insect pests.

With this understanding, Canadian potatoes will be exempted from the requirement of inspection and certification before shipment which still applies to European potatoes.

The potatoes from Canada will, however, be inspected on arrival in the United States, and entry will be refused to any shipment of potatoes badly infested with disease, even though the disease is one which may already occur in the United States, such as common scab, dry rot, powdery scab, *Fusarium* wilt and black leg. A negligible percentage of these common diseases will not bar admission, as it is recognized that the shipment of potatoes absolutely free from some of them is not commercially practicable.

Under this arrangement, those desiring to import potatoes from Canada must apply to the Federal Horticultural Board at Washington for a permit, stating in the application the name and address of the exporter, the locality where grown, the port of departure (or port of consular invoice), the proposed port of entry, and the name and address of the importer in the United States to whom the permit should be sent.

Potatoes will be inspected by the Department on arrival, and should it prove that Canadian shippers are not complying with the regulation of the Dominion Government that “Potatoes offered for export to the United States must be free from injurious diseases and insect pests,” the permit of the offending shipper may be revoked.

SAPONIN BARRED FROM FOOD.

The addition of saponin to food mixtures which are sold for use in place of white of eggs is regarded by the Bureau of Chemistry of the Department of Agriculture as constituting adulteration within the meaning of the Food and Drugs Act. In “Service and Regulatory Announcements No. 17” it is stated that the practice is usually adopted for the purpose of concealing inferiority and that therefore it comes within the definition of adulteration in the Food and Drugs Act. Saponin is used extensively in so-called substitutes for whites of egg for the purpose of producing foam and thus giving the articles a fictitious appearance of body and therefore of food value.

Saponin is a substance that when dissolved in water foams like soap. It is extracted from plants known as soapbark and soaproot, and a few other plants by boiling them in water. Its name is derived from the Latin word *sapo*, which means soap. When saponin is added to the so-called substitutes for whites of eggs it produces a foam similar in appearance to the foam produced by genuine white of egg.

LABELS FOR EGG SUBSTITUTES.

“Egg powder” in the opinion of the Bureau of Chemistry of the U. S. Department of Agriculture is synonymous with powdered egg” and “Service and Regulatory Announcements No. 17” of the Bureau states that articles which do not contain powdered egg or which contain other ingredients will be regarded as misbranded within the meaning of the Food and Drugs Act if they are labeled “egg powder” without qualification. The Bureau also holds that an article should not be labeled “egg substitute” unless it possesses the properties of eggs. These questions each manufacturer must settle for himself before shipping his product in interstate commerce. The Bureau of Chemistry is without authority, it is said, to conduct experiments to determine for individual manufacturers whether their products will accomplish the results claimed for them, and the manufacturers must do this work themselves.

OLD 'TATERS MADE NEW.

State Food Inspector W. J. Mikel, of Michigan, by experiment, has proved that old potatoes treated in a solution of lye can be made to appear like genuine early tubers.

The resemblance is so close that even experts cannot tell the difference. The experiments followed a tip from Illinois that such potatoes were in the market in the middle west.

Mikel came into prominence six months ago when he traced to Chicago packing houses "sanded chickens," which had been sent there from the Michigan lake shore.

By starving broilers for three days without food and water and then feeding them sand the farmers add three-quarters of a pound to the chicken's weight.

SCORES RENOVATED BUTTER.

State Dairy and Food Inspector W. J. Mikel, of Grand Rapids, Mich., in speaking of state supervision of foods before the Hastings Women's clubs recently, severely rapped renovated butter and told his listeners that repeated inspections of stores from which they ordered food by telephone would result in cleaner grocery stores, bakeries and markets.

"Every dealer has customers who cannot make good butter, but he is nevertheless compelled to accept their product to hold their patronage," said Mr. Mikel. "This butter is thrown into a barrel into which insects, caterpillars, refuse and mice often find their way. It is then sent to packing houses, where it is converted into renovated butter and praised in advertisements."

His listeners were horrified. Mr. Mikel declared that he had just proved by experiment that winter potatoes could be made to appear like early potatoes if treated in a solution of lye. He says that six months ago the state learned that "sanded chickens" were being prepared in Michigan for sale in eastern markets.

Press dispatches from New York say that District Attorney Swann is preparing to make war against "sanded chickens" shipped from the west. Mr. Mikel says that in preparation for "sanding" the broilers are kept without food or water for three days. Lake Michigan sand is then shoveled into the coops and the famished fowl eat a large quantity of it, greatly increasing their weight.

COCA-COLA WINS SUIT.

The Federal Court for the Eastern District of Arkansas has sustained the charge of unfair competition and granted the petition for an injunction in the action of the Coca-Cola Company against V. J. B. Butler & Sons, carrying on its business in Pope county, Ark., involving the question whether the defendants had the right of bottling and selling the complainant's product under the trade name "Coca-Cola," through purchases from parties who were lawful owners by direct sale by the plaintiff after the latter had refused to sell defendants the syrup for the purpose of bottling and objected to their use of the trade name in connection with their bottled product.

The Coca-Cola Company maintained two distinct systems for the sale of its product. By the first the syrup was disposed of for soda fountain consumption, under contracts through jobbers that no imitation or a substitute for it would be offered, and that none of the goods would be sold or offered for sale for bottling purposes. The second system comprised the sale through subsidiary bottling companies under specific conditions as to preparing the product for consumption. The Coca-Cola Company furnished all the necessary labels and advertising matter and retained all trade-name and trade-mark rights. The parent company also established standards of sanitation and cleanliness and provided a basis of inspection and supervision over all plants bottling Coca-Cola. It was further agreed that none of the syrup sold to the bottling companies would be distributed for fountain purposes. The differences between the products for use at fountains and to be sold in bottles were: In 1,250 gallons the bottlers' syrup contained 1,000 pounds more sugar than the other. It had 10 per cent more coloring matter, caramel. It contained more phosphoric acid, a less proportion of caffeine, 25 pounds to the 1,250 pounds in the bottlers'

syrup and 28 pounds in the fountain product. They were put up and sold in distinctive packages.

The defendants were also charged with using the tops and labels of the plaintiff in their sales without authority. In addition to the petition for injunction against alleged unlawful practices, an accounting for damages was asked. The defense was based chiefly on two specific allegations. First, that the preparation bottled by the defendants was made of syrup made and sold by the plaintiff and that it was purchased by the defendants for the identical purpose to which they had applied it and from parties who were lawful owners by purchase from the plaintiff; second, that the plaintiff's methods of doing business constituted an illegal restraint of trade.

The court justified the system of plaintiff in controlling authority and supervision over the preparation of the bottled Coca-Cola for consumption on one of the first principles of trade-mark law, "to protect the public from being deceived by a misleading claim that the article bearing the trade mark is the article manufactured by the owner of the trade mark, when in fact it is not, but a substitute." It was also held that plaintiff's guaranty of wholesomeness and purity, based on the precautions adopted for the bottled product and the tops and labels on the bottles, was endangered by the methods of defendants, with the possibility of making plaintiff liable to the ultimate purchaser or consumer for negligence causing an injury, even if there were no direct contractual relationship. The decision cited numerous authorities that when a manufacturer of only one article of food and drink sells it in bulk, and also puts it in bottles, the latter bearing a distinctive trade mark, a purchaser of the article in bulk will be guilty of unfair competition and enjoined if bottling it and affixing the manufacturer's distinctive labels upon the goods bottled by him. This rule, it was held, applied with much greater force when there were two varieties manufactured by the same party and sold under the same trade mark, but intended to be placed on the market for different purposes, as was the case at bar. Even in an issue where the difference between two articles was "only a pinch of salt," the force of this principle was not impugned.

The court found that the question raised by the defense as to possible restraint of trade in plaintiff's refusal of sale was not involved in the case, but practically committed itself to an opinion by citing several decisions for reference of those interested in the question, among which was that in the recent case of the Great Atlantic & Pacific Tea Co. vs. Cream of Wheat Company.

WARNING TO MUSHROOM GROWERS.

As the result of a serious case of mushroom poisoning in a mushroom grower's family recently, the mushroom specialists of the U. S. Department of Agriculture have issued a warning to commercial and other growers of mushrooms to regard with suspicion any abnormal mushrooms which appear in their beds. It seems that occasionally sporadic forms appear in mushroom beds, persist for a day or two, and then disappear. These are generally manure-inhabiting species and may be observed shortly after the beds have been cased. In the instance cited, however, these fungi appeared in considerable numbers at the time the edible *Agaricus campestris* should have been ready for the market, and the dealer supposed it was probably a new brown variety and tried it in his own family. As a result, five persons were rendered absolutely helpless and were saved after several hours only through the assistance of a second physician who had had experience with this type of poisoning.

In the opinion of the Department, this case is peculiarly significant and demonstrates that the grower must be able to distinguish *Agaricus campestris* from any of the wild forms of mushrooms that may appear in the beds. Under the circumstances, the Department strongly urges every grower to make himself thoroughly familiar with the cultivated species. Complete descriptions, with pictures of poisonous and cultivated species, are contained in Department Bulletin 175, "Mushrooms and Other Common Fungi," which can be purchased for 30 cents from the Superintendent of Documents,

Government Printing Office, Washington, D. C. (The Department of Agriculture has no copies of this bulletin for free distribution.)

SUGGESTS LIGHTER WEIGHT PAPERS.

The use of lighter weight papers will do much to relieve the present stringency in paper-making materials and be profitable to paper users, according to Circular 41 of the Bureau of Chemistry, U. S. Department of Agriculture. Since the Bureau of Chemistry began to advocate this policy for the Federal Government, in 1908, many publishers of journals of large circulation and of important books, and many users of wrapping papers, have adopted this plan. It is believed that there is ample opportunity for additional saving in this way.

The weights of printing, writing, ledger, and wrapping papers in many instances can be materially and profitably reduced. This is especially true of coated papers, for which light, high-finished, supercalendered papers can be substituted with advantage in price, durability and utility. In a single year the Government through this plan reduced the cost of its ordinary printing paper about \$15,000 by lowering the weight of paper used from 40 pounds to 38 pounds per ream. In addition, there was an estimated saving on mail charges, due to these changes, of \$23,000, or a total saving of \$38,000 annually.

NATIONAL HEARING ON STANDARDS FOR MILK AND CREAM IN NEW YORK CITY.

A public hearing on definitions and standards for milk, cream, condensed milk and other milk products will be held in New York on May 9 and 10, 1916, by the joint committee on definitions and standards representing the United States Department of Agriculture, the Association of Official Agricultural Chemists, and the Association of American Dairy, Food and Drug Officials. All persons interested are invited to attend. The hearings will be held at 10 a. m. on May 9 and 10, 1916, in the office of the United States Food and Drug Inspection Laboratory, room 1012, Appraiser's Stores, Christopher and Washington streets, New York, N. Y.

SHIPPING FRESH SHRIMP.

That canned shrimp on the grocer's shelves may be in part superseded by the fresh article, is the substance of a recent bulletin of the Department of Agriculture, which says:

"Fresh shrimp from southern waters can now be shipped to northern and western markets with their fine flavor unimpaired and without any preservative, according to a recent statement made by the investigators of the U. S. Department of Agriculture in charge of fish packing investigations, who have been studying methods for handling and shipping them.

"Heretofore canned shrimp has been the main stock on the retail market. Trial shipments made by the investigators, however, working in co-operation with the fishermen and shippers, have demonstrated that when correct principles of handling and refrigeration are applied, freshly cooked or raw shrimp may be shipped for long distances in a fresh, prime condition. Arrangements have been made, in co-operation with the shrimp fishers, for shipments on a larger scale. The shrimp will be handled from the time they are caught until they reach the consumer according to the best methods of sanitation and refrigeration.

"These methods include icing the shrimp in the boat immediately after they are caught, except in the coolest weather, in order to prevent softening and incipient decomposition that otherwise often takes place before the catch can be landed.

"The investigators of the Department are of the opinion that, as a result of the improved methods in handling, cleaning and shipping, fresh shrimp soon will be more commonly used in all parts of the country as a table delicacy. The delicate flavor of the shrimp when properly handled suggests the flavor of the lobster. Such shrimp, therefore, may be broiled, creamed, served a la Newburg, or prepared for the table in accordance with the usual lobster recipes."

MUCH TRAVELED BUTTER.

One of the quaint effects of market fluctuation which has come as a result of the development of export demand and

the changes in the home consumption and prices is the movement of 1,241 tubs of underpriced American creamery butter which was recently returned from Liverpool. It reached here on a pretty strong market and was very soon disposed of at a profit to the house on this side. This lot of butter is understood to have been sent to England last summer, and not finding a satisfactory place in the Liverpool market negotiations were commenced some months ago to have it returned.

KICK FOR PURE FOOD.

The consumer was advised to become a "crank" and a "kicker" on obtaining pure and undulterated foods, in an address recently by Charles H. LaWall, at the Civic Club, Philadelphia. LaWall, who is state chemist of the Dairy and Food Department of Pennsylvania, set down five rules by which the consumer could help in the battle for pure food. They were, first, by appreciating the importance of pure and clean food and insisting upon having it. Second, by giving aid and encouragement to those who are enforcing the law. Third, by refusing to patronize dealers who violate the principles of decency and sanitation in their exposure of foods. Fourth, by reading the labels of all package foods and rejecting all suspicious or misrepresented articles. And last, by becoming a "crank" and a kicker.

He said the following products were seldom adulterated: Beef extracts, canned fruits and vegetables, catsups, coffee, confectionery, flour, flavoring extracts, ice cream, gelatin jellies and preserves, meats (both fresh and canned), olive oil, spices, sugar and sirups.

The products in which he said there was room for improvement are butter, eggs, noodles, soft drinks and vinegar.

He also contrasted the attitude of Delaware, which, he said, is not even passive to the pure food movement, but resists it, in that in certain cases the authorities will not assist in prosecuting the violations to the slightly active sentiment which exists in this city.

GIVES OYSTERS HEALTH BATH.

No oysters are to be taken from Jamaica bay from April 15 to December 1. Meanwhile, the oysters will be treated in waters designated by health officials as free from infectious pollution.

This announcement is made by Health Commissioner Emerson as a result of a conference held with the oyster men and a representative of the Department of Agriculture. Health department and federal experts are to designate the water in which the oysters are to be treated.

Dr. Lucius Brown of the health department's pure-food bureau will report on the practical plan of inspecting the oysters treated in the pure sections.

WHEN EGG SALE IS ILLEGAL.

Following the ruling of the federal pure food authorities, the Kansas pure food board, at a meeting held recently, voted that henceforth no sale of eggs shall be legal if 5 per cent or over of the eggs are decomposed to such an extent that they are unfit for food.

The farmer is liable to prosecution if he sells eggs to the merchant which, on candling prove to be over 5 per cent bad. The merchant, in turn, is liable if he sells eggs to a consumer, or to an egg packing concern, which are over 5 per cent bad. The carlot shipper is also liable under a similar provision (under the federal law) if he ships eggs which are over 5 per cent bad.

The object of the new regulation is to force the candling of eggs all along the line. The idea is that farmer, merchant, and carlot shipper will each candle the eggs for his own protection. Here is the formal statement of what the pure food officers consider eggs which are unfit for food:

"In the opinion of the department, eggs which contain yolks stuck to the shell, mouldy eggs, black spots, mixed rots, addled, black rots, and any other eggs which consist wholly or in part of filthy, putrid or decomposed substances, are adulterated."

Other state authorities will follow the example of the Kansas officials in complying with federal regulations.

TO INSPECT BUTTER.

The Department of Animal Industry here has received instructions from the Washington office to inaugurate in New Orleans a process butter inspection service. The service will begin its work shortly, announces Dr. Tuck, in charge of the local branch.

The purpose of the order is to serve the local wholesale dealers. Heretofore these dealers, who buy renovated butter in large quantities, have had to ship it to other points, where it could be certified, before exporting it. Under the new service the dealers can export direct.

ALCOHOL FOR FLAVORING EXTRACTS.

Wadhams & Co., the wholesale grocers of Portland, Ore., brought mandamus proceedings against the San Francisco and Pacific Steamship Company to compel them to deliver two barrels of ethyl alcohol to their wholesale house in Portland. Wadhams & Co. are engaged in the manufacture of extracts and alcohol is a necessary ingredient in the manufacture of flavoring extracts. By purchasing it in large quantities from the wholesalers, the company can save considerable money.

The steamship company refused to deliver the two barrels on the ground that it would be a violation of the prohibition law—that act providing that alcohol for manufacturing purposes must be purchased from druggists and defining a procedure to obtain it. The company claims that any provision in the prohibition law that might bar it from purchasing alcohol in larger quantities from wholesalers outside of the state was in violation of the Interstate Commerce Law.

COMING TO IT.

The State Department of Food and Drugs of Indiana has made public orders of a revolutionary character in the ice cream and kindred trades, says an Indianapolis dispatch. Dr. H. E. Barnard, state food and drug commissioner, in a notice to ice cream manufacturers throughout the state of Indiana, ordered pasteurization of all cream and stock used in the manufacture of ice-cream and other frozen products after July 1, 1916.

In a similar order to all creameries and commercial dairies, producing butter for general public sale, the state commissioner declared that on and after July 1, the manufacture of butter from unpasteurized cream is prohibited.

According to a statement from Dr. Barnard, the ice cream manufacturers and creamery men generally are in favor of the orders. It is shown that a survey of butter conditions in Indiana, made by A. W. Bruner, a deputy under Dr. Barnard, has brought out the fact that creamery and similar butter made in large quantities in the state for sale, is generally being made from pasteurized stock.

An inspection of twenty-one plants in Indiana, which manufactured 8,486,681 pounds of butter, showed 96.7 per cent of the output was made from pasteurized cream.

CALL DAIRIES "FRIGHTFUL."

The milk fight in Elgin, Ill., is not confined entirely to farmers. Recently it spattered over into the council meeting.

Resolutions holding up the condition of dairies in this vicinity as "frightful" and requesting that the city physician be given a big increase in salary and put at the head of the board of health were presented by the secretary of the Civic League.

Commissioners showed their humor by referring the resolutions to Dr. A. L. Mann, city physician.

The resolutions, adopted at a meeting of the Civic League March 16, follow:

"Whereas, Inquiries by the federal government indicate that creameries and dairies are in a frightfully insanitary condition; and

"Whereas, A recent survey of the milk situation of Elgin by the Illinois State Pure Food Commission revealed a deplorable state of affairs in our milk supply; and

"Whereas, Many deadly epidemics of typhoid, scarlet

fever and diphtheria have been traced directly to a contaminated milk supply; and

"Whereas, These conditions are preventable and in justice to common humanity ought to be prevented; and

"Whereas, The city health department of Elgin has shown a disposition to provide the necessary means to perfect preventive measures by the installation of a city laboratory; therefore

"Be it Resolved, That it is the sense of this meeting that the city medical officer be placed at the head of the board of health at a salary sufficient to fairly compensate him for services and time required; that the necessary and repeated bacterial examination of milk and inspection of dairies and sources of supplies be carried on by him as part of the routine service of the division of health."

George Blumenstein of Berlin, Wis., entered a plea of guilty in federal court recently on an indictment charging him with manufacturing adulterated butter. Judge Geiger of Milwaukee imposed a fine of \$1,000. It was paid. Blumenstein, it was charged, manufactured 17,000 pounds of adulterated butter. The indictment charged him with reworking with the butter a foreign ingredient, alleged to be ordinary wheat flour, to cheapen the cost of the butter and causing absorption of an abnormal quantity of water, cream and milk. Blumenstein had previously paid penalties and special taxes amounting to \$2,600.

NEW JERSEY FAIR TRADE LAW AMENDED.

The law passed in New Jersey in 1913, prohibiting the use of manufacturers' names, or the depreciation of manufacturers' prices "for the purpose of attracting trade from other goods," has been amended by striking out the words quoted.

The original law was passed at the request of the Advertising Men's League of New York, and was tested in the case of Ingersoll vs. Goldstein, in the New Jersey Court of Chancery when the court held that the law was in derogation of the common law, and must be strictly construed. A notice in an Ingersoll watch forbidding its sale at less than \$1, but not in terms prohibiting the practice denounced by the statute, was insufficient, the court held.

The amended form of the law, which was approved by Governor Fielder on March 16, reads as follows:

"It shall be unlawful for any merchant, firm or corporation to appropriate for his or their own use a name, brand, trade mark, reputation or good will of any maker in whose product said merchant, firm or corporation deals, or to discriminate against the same by depressing the value of such products in the public mind, or by misrepresentation as to value or quality, or by price inducement or by unfair discrimination between buyers, or in any other manner whatsoever, except in cases where said goods do not carry any notice prohibiting such practice, and excepting in case of a receiver's sale, or a sale by a concern going out of business."

HOUSECLEANING FOR IOWA.

Every city in Iowa will undergo rigid milk inspections under the direction of the State Food and Dairy Department, according to announcement from Des Moines.

The tendency to carelessness on the part of dairymen and the serious results which come from using unhealthful milk has prompted the inspection. The following bulletin has just been issued by the department:

"Excessive numbers of bacteria at this time are a result of gross carelessness rather than a result of the difficulties of keeping milk properly cooled for the reason that practically all bacterial growth is arrested at a temperature of 50 degrees," says the report.

"Large numbers of bacteria in milk do not show that the milk is dangerously contaminated, but do show that the milk is more or less decomposed due to bacterial growth.

"When milk contains more than 500,000 bacteria per cubic centimeter (one-fourth teaspoonful), it is evident that the milk has been handled under conditions not approved in good dairy practice.

"Bacteria in excess of 1,000,000 per cubic centimeter show

decomposition as a result of careless methods of handling. Milk containing such numbers can not be considered a wholesome article, and the department will insist upon a bacteria count below this figure.

"The presence in milk of colon bacteria is a further significance of carelessness. The colon bacteria originate in the intestines of warm-blooded animals and the number of colon bacteria present in milk is in proportion to the amount of its contamination with fecal matter.

"As to the possibility of milk bearing disease producing bacteria, it is our opinion based on many years of inspection experience, that the only way in which the city consumer may be protected is by efficient pasteurization. Milk so treated has not lost any of its food value and is as easily digested as the unpasteurized article. Pasteurization destroys all harmful bacteria."

ARTIFICIALLY COLORED OLIVES.

E. J. Lea, director of the State Bureau of Food and Drugs, in his February report says: The claim has been made by certain olive growers that a large percentage of olives sold in California as ripe olives are in reality not ripe olives. The statement has been made that certain growers strip their trees in November and December, taking the ripe, medium ripe and green fruit. The olives are then processed in such a way that they are all colored uniformly dark.

The natural color of even the ripest and best olives is not a uniform dark color. The blossom end of the ripe fruit is always darker than the stem end, and the perfectly ripe olive may have a fairly light color. It appears that the black uniform olives have the best sale, even though the olives be very poor in texture and quality. This is a case where the average consumer buys on appearance, regardless of the actual merits of the fruit. The same may be said of immature oranges which have been "sweated" in order to develop the yellow color. Maraschino cherries go through a process of bleaching, hardening and dyeing with coal tar dyes in order to make a uniform color. These cherries are accepted by the public, whereas a natural cherry without the artificial treatment has very little sale. A highly polished rice has been regarded by the average housewife as a superior article, but as a matter of fact a highly polished rice may be injurious, owing to materials used for coating and polishing. The plain, dull appearing rice should always be chosen. Many other examples might be mentioned, but the above are sufficient to illustrate the principle involved. These points should be brought to the attention of the public in order to discriminate between natural, wholesome, nutritious foods, and other foods which have a fine appearance, but which may be decidedly inferior in quality.

Green olives which by processing have been made to appear ripe, and which are labeled or sold as ripe olives, will be regarded by this department as mislabeled under the Pure Food Act.

FOOD MEN SEEK REVENGE.

The reactionary food dealers of Kansas City, Mo., are after the scalp of W. H. Phipps, dairy and food commissioner. A campaign is under way to have him removed by the new administration, and is attaching itself for strength to the general movement to get rid of Dr. Paul Paquin, health director, and the entire health department as now constituted.

The opposition to Mr. Phipps comes from those whom he offended by making them clean up. The dirty dairymen and dirty ice cream manufacturers, the bakeries that fought against his orders to wrap bread, the packers who objected when he forced them to quit hauling fresh meat through the city exposed to dirt and flies, the market dealers and produce men who objected to screening their products, the bottled water interests, cider makers and the grocers, butchers and various others who have been subject to his regulation, are all represented in the fight on him.

Preparations are under way in various sections of California for the enforcement this year of the fruit standardization law, which was passed by the 1915 session of the Legis-

lature. Last year the law became effective only enough to govern the bulk of the grape shipments. Recently a conference was held at Winters to take up the question of standardization of fruits in Solano and Yolo counties. George P. Weldon, chief deputy state horticultural commissioner, and a large number of growers of the two counties, attended.

R. M. ALLEN ON LEAVE OF ABSENCE.

R. M. Allen, head of the Food and Drug Department, University of Kentucky, has been given a leave of absence from his work in that city to take charge of the Research Products Department of the Ward Baking Company of New York City. The Kentucky officials have been centering on milk, meat and bread in the food control of their state and Mr. Allen has welcomed an opportunity to get into closer touch with the practical operation of the largest bread concern in the world.

The Ward Baking Company has several new processes which are said to represent advanced improvement in baking, and it is the intention of this firm to offer these improvements to its fellow bakers. Mr. Allen's new undertaking will have particular connection with these new products.

MODIFY GUARANTY LEGEND DECISION.

Labels of food and drug products containing the guaranty legend and serial number issued under the Food and Drugs Act, which were printed prior to May 5, 1914, may be used until May 1, 1918, according to Food Inspection Decision 167, issued today. This decision, which is signed by the Acting Secretary of the Treasury, the Secretary of Agriculture, and the Acting Secretary of Commerce, was issued after the U. S. Department of Agriculture had held a hearing on the subject and made an investigation of the number of labels bearing the guaranty legend and serial number which remains unused in the hands of the various branches of the food and drug industries. It was found that manufacturers and dealers in food and drug products generally have removed the guaranty legend and the serial number from labels printed since the adoption of the amendment to the regulations for the enforcement of the act on May 5, 1914, prohibiting their future use, but that some manufacturers have on hand large numbers of labels, costing thousands of dollars, printed in good faith under previous regulations, authorizing the use of the guaranty legend and the serial number, which they have not been able to use in the time allowed by existing regulations.

The text of the decision follows:

USE OF GUARANTY LEGEND AND SERIAL NUMBERS ON LABELS AND CONTAINERS PRINTED OR MARKED PRIOR TO MAY 5, 1914.

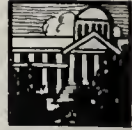
(Amending Food Inspection Decisions 153 and 155.)

It has been made to appear that (1) dealers in food and drugs have on hand a great many labels and containers printed or marked prior to the date of Food Inspection Decision 153 (May 5, 1914); (2) these labels and containers bear the legend "Guaranteed by (name of guarantor) under the Food and Drugs Act, June 30, 1906," or a serial number issued by the United States Department of Agriculture, or both; (3) these labels and containers, when so printed or marked, complied with the Rules and Regulations for the Enforcement of the Food and Drugs Act in effect at the time; and (4) great financial loss will result to such dealers, through their inability to use these labels and containers, if Regulation 9, as amended by Food Inspection Decisions 153 and 155, be enforced beginning on May 1, 1916.

Accordingly, proceedings under the Food and Drugs Act, based on the shipment in interstate or foreign commerce, or the sale in the District of Columbia or the territories, prior to May 1, 1918, of any article of food or drugs, will not be instituted solely on account of the fact that the label thereon or the container thereof bears the legend "Guaranteed by (name of guarantor) under the Food and Drugs Act, June 30, 1906," or a serial number issued by the United States Department of Agriculture, or both, upon it being established that such label or container was so printed or marked prior to May 5, 1914.



Washington D. C. News Letter



WASHINGTON, April 29.—There is nothing in the action of Judge Anderson in ruling on the “peppermint extract” case, United States vs. Thompson-Taylor Spice Co., warranting hilarity on the part of those in the trade desiring to be rid of standards of strength for extracts. By the same sign, there is no reason why food control officials who desire that there shall be standards of strength to be observed, for being cast down.

There is as yet no authoritative pronouncement with regard to the attitude or feeling of officials charged with the enforcement of the food and drugs act on the matter. However, it is safe to say that when the time comes they will assert that the ruling of Judge Anderson indicates nothing more than that the district attorney manhandled the case by giving a bill of particulars as to what the charges against the spice company were that created an issue that should never have been tendered.

The information or charge against the spice company was that it had labeled something as peppermint extract which, as a matter of fact, was not extract of peppermint. It was not extract within the understanding of the trade because peppermint extract, according to the trade, is an article that contains not less than 3 per cent, by volume, of the oil of peppermint. The article put out by the spice company, as a matter of fact, contained only about 1.4 per cent.

When District Attorney Dickinson was asked to specify why the article was not what it purported to be, he made the mistake of assuming that it was a peppermint extract, but one that was not up to the standard prescribed by Circular No. 19, of the Department of Agriculture. In his statement to the jury, the district attorney traveled on the assumption that the article was misbranded because it was not up to the standard prescribed by that circular, under the food and drugs act.

Judge Anderson, in his argument with the district attorney, showed that he was not questioning the validity of the food and drugs act. All he was asking was where, in the law, is authority to be found for the prescribing of standards.

Of course there is no such authority. Therefore the article could not have been held to be in contravention of the law, because the law fixes no standard. Nor does it authorize the Department of Agriculture to prescribe a standard. The district attorney went along trying to make it appear that the law authorizes the prescribing of such a standard.

That being the fact with regard to the district attorney, Judge Anderson had to hold that there was no question of fact involved with which a jury could deal. On the district attorney's apparent insistence that the law authorizes the prescribing of standards, the judge had to hold that the issue was a question of law and he decided that the statute does not authorize the prescribing of standards, as the argument of the district attorney seemed to be arguing. He could not allow the case to go to the jury on the issue framed by the district attorney.

When occasion arises for again bringing a case, the government is going to contend, as the Department of Agriculture asked the district attorney in this Thompson-Taylor case to do, that what constitutes extract of peppermint is a question of trade fact to be submitted to the jury. If the attorney in Judge Anderson's court had tendered that as an issue instead of what he did, the jury would have had an opportunity to decide whether the trade generally believes peppermint extract cannot be made to conform to the ordinary trade custom unless it contains at least 3 per cent, by volume, of the oil of peppermint.

The Department of Agriculture does not rely upon Circular No. 19 as having the force and effect of law, but proceeds on the assumption that the circular gives accurate defini-

tions for the articles mentioned in the so-called standards and that when the so-called standards are supported by the testimony of trade witnesses, they can be established as a matter of fact before a jury, in prosecutions under the food and drugs act.

There is no fight with Judge Anderson on the part of the officials of the departments of justice and agriculture. Judge Anderson at no time indicated that he had any thought about the validity of the food drugs act. All he was doing was to tell the district attorney that if he insisted that the so-called extract was misbranded because it did not come up to the standard set in Circular No. 19 he could not go to the jury with the case because he was alleging the violation of something that was not law at all.

In other words, the district attorney was trying to get a conviction of an unauthorized “standard” which was never intended to be other than a condensation of the understanding, in the trade, as to what is needed to give a mixture the name of extract of peppermint. One of the officials charged with the enforcement of the food and drugs act, said there is plenty of basis for the decision of Judge Anderson that the issue as presented by the district attorney was a question of law, and not one of fact, with which the jury could deal. He said the district was making it appear that the government was resting its case on a standard not authorized by law, instead of merely presenting that standard as a thing to be proved to be true by witnesses who could testify as to what the trade understands extract of peppermint to be.

Another court decision which has attracted a good deal of attention is that handed down by the Federal Supreme Court in the case of Armour & Co., plaintiff in error, vs. North Dakota, on April 10. The court, speaking through Justice McKenna, held that there is nothing wrong with the North Dakota statute which makes it a misdemeanor for any one to sell lard in pails or other containers in anything other than one, two, three or five-pound packages or full number multiples of those quantities. Armour & Co. put up lard in a pail containing two pounds and six ounces net, or three pounds gross weight. To make up a test case the packing company sold one of those pails to Dr. Ladd and then submitted to arrest. It demurred to the information. The court overruled the demurrer and assessed a fine of \$100. From that appeal was taken to the state Supreme Court and when that tribunal sustained the lower court, an appeal was taken to the Federal Supreme Court, with the result as before set forth.

Justice McKenna said such legislation is in the interest of a “greater public welfare.” That is a comparatively new phrase in judicial opinions. It was used first, so far as the writer knows in the decisions upholding the constitutionality of the anti-coupon laws of Florida and Washington. He said the object is to enable the consumer to easily determine how much he is paying for the lard and how much for the container. He is able to do that when he knows he is getting three pounds of lard for such and such a sum of money, while it is difficult for him to figure out how much per pound he is paying when the container and the contents weigh three pounds.

The law was upheld notwithstanding the fact that the pail was marked with the net weight of the contents in conformity with the Federal statute and notwithstanding the allegation that the state law, in its enforcement, was depriving Armour & Co. of property without due process of law.

Announcement has been made that a corporation organized by A. E. Carlton, banker of Cripple Creek, Colo., and capitalized at \$10,500,000, had obtained control of the Holly Sugar Company, which operates beet sugar plants at Holly, Colo., Sheridan, Wyo., and Huntington Beach, Cal.



Consular Trade Notes and Brevities



ONE of the minor products of the Hawaiian Islands is salt, the output for 1915 having been 2,400 tons, valued at \$8 per ton. Most of the salt produced in the islands is the output of the Honolulu Salt Co., whose product is confined to coarse salt and manufactured entirely by natural evaporation, no vacuum pans, kettles, or grainers being used. The company operates salt beds at Puuloa, Kalihi, and Waikiiki, on the island of Oahu, and at Mahukona, on the west coast of the island of Hawaii.

There were 20,289,568 pounds of rice exported from British Guiana during 1915, compared with 15,880,941 pounds for 1914.

Vanilla beans valued at \$273,929 were invoiced at the American consulate at Tahiti, Society Islands, for the United States during 1915, compared with \$378,146 worth for 1914.

Reports received indicate that there were 14.8 per cent more apples in cold storage on February 1, 1916, then on the corresponding date last year, according to the United States Department of Agriculture.

There were 4,390,940 stems of bananas, valued at \$2,450,754, invoiced at the American consulate at Port Limon, Costa Rica, for the United States during 1915, compared with 4,802,233 stems, valued at \$2,680,311, for 1914.

A list of the names and address of bakers in Rio de Janeiro, Brazil, has been received from Consul General A. L. M. Gottschalk and may be obtained from the Bureau of Foreign and Domestic Commerce or its district offices. Refer to file No. 74493.

Swiss chocolate prices have been raised 20 to 25 per cent to the retail trade. Manufacturers assign the present high cost of raw materials as the reason for their action. It is generally understood that the situation will be met by the Government fixing maximum prices for certain chocolate products.

A list of paper manufacturers, printers, and paper dealers in Moscow, Russia, has been transmitted by the American consular officer at that city, a copy of which can be obtained at the Bureau of Foreign and Domestic Commerce or its district offices. Refer to file No. 74291.

A list of sugar mills in Brazilian states of Sao Paulo, Rio de Janeiro, Pernambuco, Minas Geraes, and Bahia has been received from Consul General A. L. M. Gottschalk at Rio de Janeiro and may be inspected at the Bureau of Foreign and Domestic Commerce or its district offices. Refer to file No. 74494.

The American consular officer at Moscow, Russia, has transmitted a list of match factories in that consular district. Owing to the large quantities of wood in that country, firms will be principally interested in match-making machinery. A copy of the list can be obtained at the Bureau of Foreign and Domestic Commerce or its district officers by referring to file No. 74290.

Consul Maurice P. Dunlap, at Stavanger, Norway, reports that there seems to be a great need in his district at present for wholesale drugs. The drug stores are under Government supervision, and the drugs sold must be up to a prescribed standard. Therefore before orders are placed small orders will have to be forwarded for examination. A list of pharmaceutical houses and the kinds of drugs wanted can be obtained at the Bureau of Foreign and Domestic Commerce or its district offices. Refer to file No. 74319.

The wheat crop of 1915 was an exceptionally good one, the total world production being 4,000,000,000 bushels, an increase of 800,000,000 bushels over the production of 1914, according to preliminary figures given in the bulletin of the International Institute of Agriculture in Rome. More than 90 per cent of the 1915 wheat crop, or 3,675,000,000 bushels, was produced in the Northern Hemisphere, while 325,000,000 bushels came from the Southern Hemisphere.

In the latest report of the dairy and cold storage commission there is published, as a result of the investigations of the Cornwall, Ontario, dairy record center, contrasts between the profits derived during the lactation season from 43 cows of selected herds with 50 cows of poorer herds. The 43 selected cows showed a total net profit of \$1,540, while the 50 poorer cows gave a profit of only \$615.

In the message of the president of Guatemala to the National Assembly on March 1, published in *El Guatemalteco* of the same date, the total foreign commerce in 1915 is given as \$16,639,061, a decrease of \$5,446,079 from the total foreign commerce of 1914. The imports last year were \$5,072,476, and the exports of \$11,566,585, showing a favorable trade balance of \$6,494,109, an increase, owing to exceptionally good crops, of \$3,051,197 over the trade balance of 1914.

SUGAR PRICES IN CANADA.

The retail price of sugar in the New Brunswick district, which increased rapidly after the beginning of the war, reached a high mark again in February of this year, being \$7.10 per barrel. Now the price is \$7.75, with further advances expected this week. Eastern Canada looks to the West Indies now, with the supply of Germany and Austria cut off, and is importing in large quantities, especially from Barbados.

The great demand for sugar has increased the cost and curtailed the supply of molasses.

DIFFICULTIES OF MATCH INDUSTRY.

The manufacture of matches is becoming difficult in Germany, owing to the lack of the proper wood. Previous to the war most of the wood for match sticks was imported from Russia.

Russia has difficulty in manufacturing matches for the want of chemicals, which were formerly imported from Germany. The heavy import duty on matches is therefore removed, and this opens a large market for foreign matches.

Norway and Sweden are the only European countries now able to manufacture enough matches for domestic use and for an export surplus.

BETTER PACKING FOR RAISINS.

A Canadian trade journal recently complained of the way California raisins were packed, and made certain suggestions as to possible improvement. The easily split boxes that some of the packers use come into the retailers' hands with big openings in the majority of them, out of which much fruit has been lost. Frequently they burst open as soon as they are picked up. A good, substantial box would interest the retailer in California fruit, by insuring his getting all the fruit he bought. The hard-fiber box employed in the shipment of raisins by some packers is recommended here.

It is not a matter of a box or two, but of about 8 out of every 10 appearing with a big sliver ripped off and a few raisins lost; not enough to make a claim on each shipment, but bulking up to an important item in a year's business.

SPECIAL PACKING METHODS.

An American consular officer has called attention to a special style of packing that has been adopted by certain Euro-

pean exporting houses with a view to the prevention of pilfering.

The report states that the merchandise is first placed in an inside container, which is then bound with wire. Burlap is wrapped around the entire package, and this wrapping is again bound with wire transversely, with the result that the entire wrapping must be removed to gain access to the inner package. The package prepared in this way is then crated or boxed, as may be necessary. In the outer crating or box special nails of serrated form are used. These nails can not be readily removed without evidence of the removal appearing plainly on the case. This method of packing is not adapted to heavy and bulky merchandise, but it is this class of exports that suffers least from pilfering.

LARGE INCREASE OF MANUFACTURED ICE.

The quantity of ice manufactured in the United States in 1914 was 45 per cent greater than it was in 1909. The value of the product increased 41.2 per cent in that period. The United States Bureau of Census has just completed its preliminary statement of the results of the survey of the industry in 1914.

Returns were received from 3,068 establishments engaged in the industry in 1914, whose output of ice for that year amounted to 20,628,678 tons, valued at \$62,314,055. At the 1909 census there were reported 2,342 establishments, with an output of 14,230,208 tons of ice, valued at \$44,139,053.

The number of establishments for 1914 exceeded the number reported for 1909 by 726, or 31 per cent; the increase in the quantity of ice manufactured amounted to 6,398,470 tons, and the value increased by \$18,175,002. Of the total number of establishments reported in 1914, 523 were engaged primarily in other industries and manufactured 2,363,000 tons of ice, valued at \$7,090,000, as a subsidiary product. At the census of 1909 338 establishments reported 1,582,259 tons of ice, valued at \$4,249,790, as a subsidiary product.

BANANA INDUSTRY OF COSTA RICA.

Costa Rica's shipments of bananas during 1914 were 91 times the exports in 1883 (in which year the exportation of this fruit began), and in 1915 exceeded those of the preceding twelvemonth, although exact figures are not at hand. The marvelous development of the industry (which is now the great single industry of the Republic) is indicated in the following table, compiled from the official returns of exports for the last 32 years:

Years.	Stems.	Years.	Stems.	Years.	Stems.
1883.....	110,803	1894.....	1,374,986	1905.....	7,283,000
1884.....	420,000	1895.....	1,585,817	1906.....	8,872,729
1885.....	401,183	1896.....	1,692,102	1907.....	10,166,551
1886.....	595,970	1897.....	1,965,631	1908.....	10,074,599
1887.....	889,517	1898.....	2,331,136	1909.....	9,465,690
1888.....	854,588	1899.....	2,962,771	1910.....	9,097,285
1889.....	990,898	1900.....	3,420,166	1911.....	9,309,586
1890.....	1,034,765	1901.....	3,870,156	1912.....	10,647,702
1891.....	1,133,717	1902.....	4,174,199	1913.....	11,170,812
1892.....	1,178,812	1903.....	5,139,163	1914.....	10,162,912
1893.....	1,278,647	1904.....	6,165,400		

Costa Rica holds first place among the Latin American Republics in the cultivation of this fruit. Through seed selection and better care of the soil the planters are gradually eradicating the banana disease, which made its appearance here about 10 years ago. The United States presents by far the best market for Costa Rican bananas, taking, in 1913, 8,354,722 stems out of a total of 11,170,812 stems exported.

SWISS PURCHASES OF SUGAR IN U. S.

Large purchases of sugar have been made in the United States recently by the Swiss authorities, an extension of American trade in which the Berne consulate has given assistance. It is stated in the Berner Bund, one of the leading newspapers in Switzerland, in its issue of January 28, 1916, that it is understood that the Government has ordered an immediate inventory of the sugar stocks of the country.

It is explained by the newspaper that this precautionary measure is due to speculation. Sugar prices have lately

shown a strong upward tendency, and new maximum prices are expected in the future. The Berner Bund says that many sugar dealers hold considerable stocks in anticipation of the new maximum prices, in order to sell their wares at a big profit. The newspaper says further:

An inventory at this time is of particular value, as it will make clear the extent of further purchases. In Austria, it is true, several thousand carloads of sugar are still awaiting shipment to Switzerland, but as there is a shortage in the compensatory wares desired of Switzerland by Austria in return for this sugar, it is difficult to tell when the country will come into possession of this sugar. As a result, only the United States is considered as an open market for the Swiss with regard to sugar purchases.

CANADIAN NOTES.

Through the joint action of the Fisheries and Militia Departments the Canadian Government has arranged to ship about 40 tons of fish weekly to England. According to press reports, the first shipment, consisting of salmon and halibut from the Pacific coast and cod, soles, smoked haddock, and fillets from the Maritime Provinces, is now being dispatched. Cold storage facilities have been provided on the transports sailing between Canada and England. The Dominion Government hopes that through these shipments a large permanent market for Canadian fish may ultimately be established in the mother country.

A canning machine manufactured by an American company is being extensively used this season by the fish and lobster canners of the Yarmouth consular district. The machine practically does away with the old and slow process of soldering. Solder is used only to close one side of the can, the ends being sealed without its use. However, a special can made by the same company, costing \$0.20 more per case, must be used. The machines at present retail at \$130 each or rent for \$30 a month. There is a considerable saving in time, labor, and material, and it is thought that in the future the machine will come into general use in the canning industry of Nova Scotia.

PARCHMENT FOR FISH-CANNING.

Fish and lobster canners of the Yarmouth consular district are handicapped because of the shortage of parchment which is used in the canning industries as linings for the cans. Belgian and German parchment have heretofore been used almost exclusively; but now consumers must look to the United States or elsewhere for this commodity. There are about 75 canneries of various sizes engaged in canning fish and lobsters in the Yarmouth consular district.

Parchment manufacturers in the United States have an excellent opportunity to secure this trade permanently if they can only offer satisfactory parchment. The chief objection brought against the American parchment is the indistinct color as compared with the Belgian and German manufactures. This objection, however, may be easily overcome if the canners are furnished with a proper guaranty that the endurance quality of parchment produced by American manufacturers is equal to the corresponding grades of Belgian and German products.

The majority of the canners buy their parchment from the local wholesale dealers (the names of which may be obtained at the Bureau of Foreign and Domestic Commerce or its district offices by referring to file No. 72642).

TILEFISH INDUSTRY MAKES GAINS.

During the month of March there were landed in New York by 16 vessels 39 fares of tilefish, aggregating 615,000 pounds. This is an increase of about 30 per cent over the landings in February, and the number of vessels engaged in the fishery more than doubled. In addition, about 10,000 pounds of tilefish were landed by three smacks at Atlantic City, and it is stated that probably a regular fishery for this species will be established at that place.

A prominent retail dealer in Washington states that his market is selling about a ton of tilefish each week, and about

100 barrels a week are being sold in Baltimore. One retailer in Boston and another in Ithaca have volunteered statements that they sell more tilefish than all other kinds of fish combined. It is understood that New York dealers are now shipping tilefish as far south as Atlanta, Ga., and that considerable consumption is being established in the Middle West.

During the early part of March weather conditions interfered with the fishery, and the price received by the fishermen rose in one instance to 10 cents per pound; but in three days at the end of the month about 240,000 pounds were landed, and the price was reduced to about 5 cents.

MANY WEIGHTS SUBMITTED.

So great has been the demand upon the United States Bureau of Standards for tests of weights from various sources throughout the country that the force available for that purpose has been compelled to face an accumulation of work. A recent count showed that there were on hand more than 700 weights awaiting test, and that three months would be required to complete the task.

The development of the state inspection of jewelers' weights and measures is indicated by the submission of two sets of metric carat weights from the states of Michigan and Pennsylvania. The annual test of the two sets of weights used by the Assay Commission in checking the coinage of the mints at Philadelphia was recently made. A set of high-precision standard weights for the University of Illinois was also tested.

The crew of Bureau of Standards test car No. 2, in testing track scales in New Jersey, made about 40 tests, on which reports were sent to the owners and to the department of weights and measures of the state. Test car No. 1 tested the Baltimore & Ohio Railroad master scale at Martinsburg, W. Va. The crew of car No. 2 was subsequently directed to operate car No. 1 in testing the master scales enumerated by the American Railway Association.

MATCHES IN SPAIN.

By a royal decree issued February 23 the Spanish Treasury Department is authorized to acquire the requisite raw materials for the manufacture of wax matches, waiving the usual formalities of auction and competitive bids. Contracts with manufacturers of wax matches may be modified to permit an increase in the selling price when the raw materials in the aggregate are 10 per cent higher; that is, when the rise in the price of one ingredient is not offset by a fall in the price of another.

The manufacture of matches in Spain is controlled by a monopoly, and wax matches alone are on the local market. They have phosphorescent ends, something like the so-called parlor match, and are put up in boxes with one sandpapered surface. As the phosphorus and chlorate of potash used in the manufacture of Spanish matches must be imported from countries that have now forbidden their export, the local match industry is placed in a difficult position. By raising the price of matches and checking their consumption it is hoped to economize present stocks until the Government can acquire the much-needed raw material. Incidentally it may be mentioned that all sorts of patent pocket lighting devices are popular in this country.

INCREASE IN BRITISH FOOD PRICES.

The British Board of Trade Labor Gazette states that the retail prices of food on March 1 in the United Kingdom were higher than on February 1 by about 1 per cent. Mutton advanced more than 3 per cent on the average, but beef showed a comparatively small increase. Flour and bread prices rose about 2½ per cent, as compared with 6 per cent in the preceding month. There was an increase of 7½ per cent in the price of granulated sugar, one of 4 per cent in the price of margarine, and of 3 per cent in that of cheese. Butter increased slightly on the average, as also did potatoes, but milk, tea, and bacon remained practically unchanged in price. Eggs and fish were the only articles for which a decline was recorded, the average percentage changes for these being 12 and 4, respectively.

As compared with March 1, 1915, the general level of prices rose during the year about 40 per cent, and those of granulated sugar about 30 per cent. Prices of meat, bacon, and tea increased about 25 per cent, and of milk, butter, cheese, and eggs about 15 to 20 per cent. Bread and flour were dearer than a year ago by 14 and 11 per cent, respectively. Taking the country as a whole and making allowance for the relative importance of the various articles in working-class household expenditure, the Gazette states, the average increase in the retail prices of food in the United Kingdom since the beginning of the war may be put at 48 per cent.

FORECAST OF INDIA'S RICE CROP.

The Indian department of statistics has issued its final general memorandum on the rice crop of 1915-16, basing its figures upon reports received from provinces that contain 99 per cent of the area under this cereal in British India. The statistics refer to all rice crops, both early and late, with the exception of summer rice in the United Provinces, which, however, is insignificant.

The area reported is 76,792,000 acres, as compared with 76,625,000 acres, the revised final area of last season. The present figure, therefore, shows an increase of 167,000 acres, or 0.2 per cent. The total yield is estimated at 32,877,000 tons, as against 27,242,000 tons, the revised final estimate of last year, or an increase of 21 per cent. The present estimates for both area and yield are the highest on record.

Bengal leads in the cultivation of rice, having 26.7 per cent of the total area under this crop in British India, and is followed by Bihar and Orissa with 21.9 per cent of the total area. Madras, 13.6 per cent; Burma, 13 per cent; the United Provinces, 7.8 per cent; Central Provinces and Berar, 6.3 per cent; Assam, 5.9 per cent; Bombay, 2.3 per cent; Sind, 1.4 per cent, and Coorg, 0.1 per cent. Though having the smallest area devoted to rice, Coorg ranks first in yield per acre, the estimates for 1915-16 working out at 1,448 pounds, as contrasted with 1,209 pounds for Bihar and Orissa, which rank second in this regard.

CHILLED BEEF FROM BRAZIL.

The transition in the Brazilian chilled-meat business from a mere domestic industry to an export trade upon which the country looks as an important asset for the future is interestingly shown forth by the specially compiled table of 1915 statistics given below. Unfortunately, there was no segregation of the data relating to this trade in the preceding years in the Brazilian official returns, but the amounts exported were practically nil. The first large cargo to leave for a foreign country was that of 205,350 pounds for New York from Santos in July, 1915. [See Commerce Reports for Aug. 19, 1915.]

The exports of chilled beef from Brazil during 1915, with values expressed in United States currency, were:

Port of origin.	Pounds.	Value.
Para	7,902	\$ 700
Rio de Janeiro	1,239,992	94,921
Santos	17,482,839	1,434,778
Total	18,730,733	\$1,530,399

Country of destination.	Pounds.	Value.
United States	4,393,287	\$ 369,296
France	222,910	18,612
Italy	4,521,910	354,707
United Kingdom	9,592,626	787,784
Total	18,730,733	\$1,530,399

These figures are indicative of promising future foreign trade in a product heretofore practically unknown among Brazil's exports. This is due to the increased areas devoted to cattle raising, to the attempts at improving native breeds, to the erection of packing houses, and the establishment of facilities for accommodating such shipments at ports of export, principally Santos. It is claimed here, however, that the equilibrium between the raising and the slaughtering of cattle is not being as carefully preserved as it might be.

How Co-operation Helps—The Day of Horace the Hog Has Passed in World of Commerce—Constructive Work Now in Evidence in Place of Cut-Throat Tactics of Other Days

Address of Commissioner H. E. Barnard before recent Convention of Indiana Wholesale Grocers.

A DISCUSSION of how co-operation helps becomes a platitude before such an audience as this. In your Association you have found out that it does help, and help mightily. If that were not the case this would not be the largest gathering of wholesale grocers ever met in Indiana, nor would it be possible for us to sit down at a banquet such as the splendid one we enjoyed last evening, in perfect harmony with every other man at the table and listen, in full sympathy, to the orators of the evening.

I am glad to use the word "co-operation" in talking with you because it gives me an opportunity to tell you how the present-day food control official goes about his work. There was a time when the official was a combination inspector, chemist, prosecutor and judge, as many food manufacturers throughout the country can testify. From the beginning we have, as you know, endeavored to do constructive work in Indiana, and for the most part we have been successful. Surely whatever little differences we may have had over the matter of labels in the days when food control was young have long since passed, and when we meet today, whether it be as officials or otherwise, we find that we are facing the same problems, that we are working for the same end, and that is more food and better food for the consumer at a price which he can afford to pay.

The day when a man could go into business with an eye single only to his own interest, when he could even for a little time successfully operate without giving real consideration to the welfare of the great consuming public, has passed. The man who goes into business today, whether he is a food manufacturer, distributor or a retailer, will succeed only to the extent that he serves. This point of view, while old in the books on economics, is comparatively new in the commercial world. Nevertheless, it is now firmly established, and it has been fixed by concerted effort through such organizations as those ably led and efficiently officered.

May I pause just for a moment to tell you how very helpful your late secretary, Mr. Bigger, was to our food department in putting the matters of your Association and the retail trade in Indiana in touch and in working harmony with our office? May I also recommend to you your present secretary, Mr. Ward, as "some" advertiser? He pinned a canned corn story on me a month or so ago, that, if my clipping bureau has not been duplicating its service, has been produced editorially and otherwise in nearly every daily paper in the country. The secretary of the National Canners' Association was so kind as to congratulate me and thank me in behalf of his people, and he will not yet believe that I had nothing to do with sending it out. This, of course, is another reason why I am grateful to Mr. Ward, for if there is one thing a food official dislikes it is self-sought publicity.

Seriously, I think it is high time for food manufacturers, brokers, jobbers and retailers to get together and in a determined, well thought-out way, tell the public whom they serve something about food which will be helpful instead of burdensome, and pleasant instead of distasteful. I refer to the flood of poor food publicity which now infests the daily press and the popular magazine. Years ago, and I am glad to put it in that indefinite way, there seemed to

be occasion for howling about food adulteration and food fraud. That was before you organized, but if there ever was need for frightening the consumer and so compelling legislation, you know as men who handle food, and I know as an official, that it is not now necessary to frighten folk over their food supply.

In a mild and inoffensive way I am trying to do something from my office which will reassure the consumer so that he can sit down to dinner without wondering whether it is better for him to die of starvation or food poisoning. The public must be taught to trust its food, not to fear it, and the writer on food subjects who gleefully weaves the tale about food adulteration at so much a thousand words, or who points his accusing finger at the scarlet letter on the breast of the convicted manufacturer, the narrator of the dreadful stories of rotten eggs, embalmed beef, polluted oysters, plaster of paris bread, and diseased milk must be forced from his muckraking. I use the word "forced" advisedly. A food industry cannot go forward bearing the burdens of libelous publicity. The press must understand that it is up to them to co-operate in the campaign you and I are making in behalf of a well-nourished public, and that they fall far short of co-operating when they accept money for pure food advertising at the cashier's desk and send out from the editor's desk a nauseating, untruthful story of food poisoning.

I am sick and tired of all this talk about debased food. You grocers believe in the quality of the food you sell. I am quite sure that if you didn't believe in it you wouldn't be selling it. That is optimism for you, but it is optimism based on many years' contact with the people who make food and sell it. It is optimism borne of the belief expressed a moment ago when I said that no man could hope to succeed in the commercial world today who did not believe in his business and who did not understand that his success or failure depended upon his ability to serve.

And now I want to suggest something to you. You know of course that you are selling the least discriminating, least skilled buyers in the market. When a man makes bolts he knows that the purchasing agent of the firm to which he sells them will insist that they are made from the right kind of metal; that they are milled right; that they are the right size and that they are sold at a reasonable price. But when a man sells breakfast food he goes up against the gerat unknown, the whim and fancy of a public that must eat to live, but that never, in school or out of it, has learned how to eat.

If the buyer for the home, the mother and housekeeper is to be taught how to buy and what to buy, she must be taught indirectly by the daily paper or directly by her grocer or the manufacturer who has something to sell her and who tells her about it by demonstrators or readable circulars. In other words, you advertisers must get your educational material into the home.

Going to Irvington last evening I studied with much interest the food stories told by the cards in the street cars. On one side of my car were eighteen cards. Nine of them discussed foods and beverages. They did it well. Some of the stories were most attractively told. The man who de-

signed the cards and wrote the copy knew what he was about. I am not so sure that the man who is paying for the advertising is getting his money's worth. It seems to me, and here I go up against the expert, that the publicity departments of your business cater to the few instead of to the masses. Of course the street cars are commonly used, but they are used by the man of the family instead of by his wife. Remember, it isn't every woman who gets down town to shop. She doesn't have the money to go to town with and she doesn't have the time to spare from her children and her home. The electric sign and the street car are good advertising mediums for cigarettes and the freak collars. Do they furnish the way to reach the housewives who buy 95 per cent of the families' food? And, again, the public will never get over its fear of the food supply and fully trust you who are supplying it with nutritious, appetizing food at reasonable prices, until the press wakes up to the fact that fear of food does a hundred times more damage than bad food; that a constructive rather than a destructive policy ought to determine its discussion of all food problems.

One other suggestion and I am through; that is, that we do not know enough about the study of nutrition and economical buying. They parallel each other. The cheapest foods are the most nutritious, and yet I would not advise the loading of any table with the cheap cereals simply because they are full of food. Neither would I urge the poor woman to fill her husband with cabbage until he thinks he is well fed, when as a matter of fact he is simply stuffed full. There is a difference between bulk and food. In my study of food and nutrition I have always found, however, that there is a very real reason for the use of delicacies, of prettily packaged products, of carefully prepared breakfast foods, of appetizing canned goods; in fact, of all the wonderful things that make a visit to a well stocked grocery store a joy to the eye and a teaser to the appetite. It is not necessary for me to tell you that bulk rolled oats cost only a third as much as the prepared breakfast food, neither is it honest for me to tell the housewife that as a lesson in economy unless I at the same time tell her that what she gains in cheaper foods she wastes in gas and time and labor in preparing the food for service.

We cannot deny that canned goods cost more than dried beans or split peas, but if they do cost more in the can they are worth more, not only because of the ease with which they can be served, but because it is possible to put the flavor of the field and the garden into the can and it is not possible to hold it in a bin of dried beans. The average family is well fed because out of the abundance that loads the American table each member chooses, without knowing why, such amounts of the various foodstuffs as are necessary. But this is not enough. It isn't always true, and it is expensive. Fortunately, from this year on the girls of Indiana are to be taught homemaking, and that means the subject of nutrition and careful buying as well as decoration and good furnishings, and our future home-makers will take up work in their own new kitchens better informed about food, how to buy and use it than were their mothers. Indeed, than are their mothers today after years of undirected effort.

When the cook knows more about food values she will use the materials on her pantry shelves more successfully and more economically. At the present time the discussion of food for the home resolves itself too frequently into the relating of innumerable receipts. What does it avail a woman to have thirty-five receipts for utilizing the remains of a roast if she does not know how to buy the roast in the beginning? How helpful is it for the manufacturer to blazen the merits of his spaghetti or beans, in expensive advertising, unless he goes further and besides giving receipts, tells why his particular food ought to be used? Why? Because it possesses definite food qualities; because it furnishes carbohydrates cheaper than the food it displaces on the table or furnishes as much food for the same money in a more palatable form.

There is nothing new about my argument. It has been proven successful by the up-to-date dairyman who knows

that his milk is a real food as well as a beverage. It has been proven by the wonderful campaign for selling California raisins, but it has not been applied to very many splendid products which pack your warehouses.

Food buyers must understand the fortune of the family rests in their hands. If they buy well they feed the family well, and they have a surplus for the savings bank. If they buy extravagantly and ignorantly they bring poverty into the home and they probably feed the family poorly. Careful and intelligent buying, such as will be possible when you direct the buying, will cut out food fads and foolish buying, will put the funds of the home on a safe basis and build your business on solid rock.

FROZEN AND DRIED EGGS.

The frozen and dried egg industry, declares a new publication of the Department of Agriculture, is a permanent one because it meets a distinct economic need. Many eggs which could not stand long shipments may be preserved as wholesome food by freezing them out of the shell or by drying. In the beginning, however, there was a natural popular prejudice against the business, which was increased by the ignorance and carelessness of some of the pioneers. It was under these conditions that the Department of Agriculture undertook a study of the problem in order to lay the groundwork for a scientific preparation of an extremely perishable product. Some of the results of this study have just been published in a professional paper, Bulletin No. 224, "A Study of the Preparation of Frozen and Dried Eggs in the Producing Section."

The eggs commonly used by reputable firms for breaking are small or oversized eggs and dirty, cracked or shrunk eggs. To the trade these are known as "seconds." They are not to be confused with eggs that are unfit for human use, such as the classes known as black, white, mixed, and sour rots, green whites, eggs with stuck yolks, musty and moldy eggs, blood rings, etc. These should be rejected entirely or else used for tanning purposes only. Eggs with a bad odor should be rejected absolutely.

Careful candling before the eggs go to the breaking room is one of the principal points upon the importance of which the new bulletin insists. Careful candling is not only necessary to prevent the use of unfit eggs, but it will also prevent the waste of a number of perfectly good eggs which might otherwise be rejected. In order to insure that the eggs are well candled, the bulletin recommends some system by which the work of individual candlers may be checked. Eggs that it is found difficult to grade should be set aside by the regular candlers for examination by an expert. Furthermore, the eggs should be graded again when out of the shell, for certain kinds of infection can only be detected when the eggs have been broken. When grading eggs out of the shell, only two grades should be recognized—food eggs and tanner's eggs.

While it is desirable, from a financial standpoint, that the breakers should work with rapidity, too much speed is not to be desired because of the danger that unfit eggs may be included with good ones before the breaker can detect the difference. When this happens, no attempt should be made to save the good eggs. In practice, it was found that in order to prevent waste and to insure good grading, no more than three eggs should be broken into a cup before it is emptied. It was also found that from twelve to sixteen eggs a minute is as rapid work as can be done satisfactorily. Even this is not possible if the breakers are permitted to talk or their attention is distracted from their work in other ways.

The bulletin also discusses in some detail the measures necessary to secure cleanliness in egg-breaking establishments.

It emphasizes the necessity for separate rooms for chilling, candling, breaking, freezing and drying the eggs. Each should be maintained at a definite temperature by artificial refrigeration. A room for washing and sterilizing the utensils should adjoin the breaking room.

Government Egg Car to Tour Indiana

THE egg candling, packing and chilling demonstration car of the U. S. Department of Agriculture is now on a tour over the lines of the Big Four, New York Central and L. E. W. railroads in Indiana in order to aid poultry and egg handlers to pack and ship their products to distant points. The car starts on its tour at Greensburg on May 1 and will end it at Portland on July 1.

At all points touched demonstrations of the proper methods of candling eggs and of packing and chilling eggs and poultry will be given. The demonstration car is in itself a complete refrigerating plant on wheels, with its own gasoline engine for operating its refrigerating blowers which in the course of half an hour can lower the temperature of the cold room to 32 degrees.

One object of the car's tour is to show buyers and ship-

benefiting the producer in any way. Much of this loss could be avoided by better packing and stowing. The government has carried out elaborate tests of different methods and those that have been found most successful are discussed by the experts in charge.

Information is given on the dressing, grading, pre-cooling and packing of poultry. A model of a small, inexpensive, ice-chilled, pre-cooling plant, designed especially for poultry and eggs, will be exhibited and explained. Poultry properly packed and chilled before being placed in the refrigerating car does not deteriorate either in flavor or quality as do ordinary ice-packed shipments and keeps better on the market.

In previous seasons the demonstration car has traveled through southern Indiana, Texas, Missouri, Kansas, Okla-



pers how to candle eggs by commercial standards so that they can be bought on the basis of quality and an enormous amount of waste and loss avoided. The car is in charge of government specialists, who show all interested exactly how to distinguish between "fresh" eggs, "stale" and "heated" eggs, "bloodrings," "white rots" and "black rots." The demonstration in detecting "white rots" is regarded as especially important, as these frequently are confused with fresh eggs. Grading by size and condition of shell also is demonstrated. The importance of pre-cooling the eggs before they are packed and shipped in an ordinary refrigerating car is emphasized. In the demonstration car, eggs can be brought down to a proper temperature for shipping in twenty-four hours; if not thus cooled they would require four or five days to reach this low temperature in a refrigerating car.

Proper methods of using fillers and flats and packing eggs in cases are also demonstrated and, by the aid of models, shippers and railroad men are shown methods of stowing cases in cars so as to minimize damage in transit. Nine per cent of the eggs shipped to New York City alone are now cracked or mashed on the way to destination, an enormous waste which raises the price to the consumer without

homa, Arkansas and Kentucky with gratifying results. The car is, in fact, a traveling argument for doing business on a quality basis. This has been found by experience to be the only basis which assures satisfactory profits to producers and shippers.

HOLLAND USES MOST COFFEE.

The people of the world annually consume more than 2,500,000,000 pounds of coffee. Enough to load a train of cars reaching from Philadelphia to Pittsburgh. Three-fourths of this is grown in Brazil, a country that has become rich from its coffee industry alone. Europe and North America bear approximately the same relation to the consumption of coffee that Brazil does to its production, these two continents using nearly four-fifths of all the coffee the world produces.

Holland is the greatest coffee drinking nation on the globe. It uses fifteen and one-eighth pounds per capita annually, while we use nine and one-half pounds; Germany, five and one-eighth pounds; Austria-Hungary, two and two-fifths pounds, and the United Kingdom, two-thirds of a pound. On the other hand we use less than one pound of tea per capita, where the United Kingdom uses nearly seven pounds.

Interior Quality of Market Eggs—Eggs of Complex Structure—Study of Nature of Different Parts Leads to Understanding of How to Handle Eggs in Order to Keep Them in Best Possible Condition

By EARL W. BENJAMIN

BY a little practice and study, the housewife can spend a few minutes in candling her table eggs and can know then approximately the causes for all qualities observed. There are so many causes by which various undesirable qualities of eggs may be produced, that it is often desirable to candle all eggs even though their quality is apparently above suspicion.

As a standard to be used for comparison with all other eggs, the appearance of a strictly fresh egg should be noted. The eggs shown in this illustration were only five hours old and were kept under favorable conditions. The term "fresh" however, should mean a definite quality rather than a definite age, and will be used in the former sense throughout this bulletin.

In candling eggs the twisted appearance of the shell pigment will often be noticed. This appearance of the shell is apparently due to slight variations in the density of the pigment, which are probably formed as the egg passes through the vagina. Eggs from some hens display these lines much more plainly than do those from others.

The appearance of an egg before a light is greatly affected by the amount of pigment in the shell and the intensity of the light used. All the eggs shown in this bulletin were candled with a twenty-candlepower tungsten electric light, which is relatively white. A carbon electric light will give a slight red tint to an egg. An oil flame will give still more of a red tint. A gas burner with mantle will give eggs an appearance similar to that shown in the illustrations in this bulletin, while a gas fishtail burner has an effect similar to that of an oil flame.

A fresh egg has a very small air cell, so small that the light usually does not penetrate it, and it appears darker than the remainder of the egg. Except for the spots in the shell, the egg appears perfectly homogeneous. The yolk appears as a very dim shadow floating across the line of vision after the egg has been twisted before the candle. As the yolk moves around, there is usually an indistinct dark spot with an accompanying reflection of light, which follows it. This is the outer end of one of the chalazæ, which extends out close to the shell and is often mistaken for a meat spot. The meat spot, however, is darker and has no reflection of light on its edge. In the fresh egg the yolk appears to be suspended well up in the albumen, moves freely, and its deeper color shades very gradually into the normal tone of the albumen. The albumen has a pink color, the intensity depending on the shell pigment.

The appearance of the opened fresh egg should also be studied. The color of the yolk is affected largely by the feed given; yet, if the egg is fresh, the yolk will have in general a lighter appearance than it will after the egg has been kept for a while. A dark yolk usually denotes heating. The germinal disk will appear as a minute spot on the yolk, as shown in the upper right-hand corner of the yolk. This disk will show, no matter whether the egg is fertile or infertile, although usually it is not so distinct in the latter case. It is usually light-colored, but may be dark. The yolk should stand up round, due to the strong vitelline membrane. This

membrane should show no wrinkles nor signs of weakening that would allow the yolk to flatten or to flow into the albumen. The albumen is almost transparent and stands up firm around the yolk. The very thin inner layer of albumen clings to the vitelline membrane of the yolk and is hardly visible. The chalazæ are firm, usually twisted hard, and relatively close to the yolk. The middle layer of albumen surrounds the yolk closely and appears as a somewhat jelly-like mass merging gradually into the watery outer layer which lies next to the shell. No cloudiness nor color should appear in the albumen of a fresh egg. The contents of the egg should have practically no odor except the slight odor of lime, which can usually be detected. Fresh eggs are usually free from bacteria, or nearly so, and the chemical analysis is nearly constant.

When eggs are first laid they normally possess the characteristics of perfect fresh eggs, as has been described. There are, however, various abnormalities that may occur, and, since these abnormalities are usually detrimental to the quality of eggs, some of them will be described here.

The physical condition of the bird probably has an effect on the quality of the egg. It is thought that the size and color of the yolk, percentage of moisture, condition of the shell, firmness and amount of the albumen, and various other features, are affected by food, season of the year, condition of the bird, and the like.

Green food, yellow corn, and general ranging seem to transmit a deep color to the yolk. Such food as white corn, buckwheat, and wheat, lack of exercise, and poor health, seem to produce a pale yolk. Any one of these factors may give distinct results. Excessive quantities of green food, such as rape in the early spring, sometimes seem to have a disastrous effect on eggs, causing the yolks to be very dark in color and to possess an undesirable odor. Onions readily affect the odor and the flavor of eggs. Cabbage also does this to some extent, as do a few other foods. Many persons claim that they can detect a difference in the flavor of eggs when hens are allowed free range where they have access to bugs, worms, and the like.

Eggs produced during the summer seem to have a more watery albumen than those produced during the spring. Watery eggs seem to be of lower quality, and undesirable for cold storage or long holding. In candling such eggs, the yolks seem to float lower in the albumen and appear slightly darker than in spring eggs.

Certain hens probably have an inherited tendency to produce eggs of inferior quality. If this is true it will be likely to remain as a characteristic of the line of descent, and the flocks must be carefully culled in order to eliminate such undesirable birds.

Detailed reports have been made by Glaser of double-yolk eggs resulting from the joining of two yolk sacs during their development. These sacs gradually develop one common blood supply, their growth becomes identical or nearly so, and both yolks mature and drop into the oviduct at about the same time. It is supposed that two yolks may develop with

the same yolk sac, and sometimes within the same vitelline membrane.

Many yolks have more than one germinal disk, these showing as several round light spots on the surface of the yolk. Only one of these disks usually shows development when an egg is incubated.

Yolks are sometimes dropped into the oviduct before they are mature, and thus appear as abnormal yolks in the completed egg. Sometimes yolks are dropped outside the oviduct into the body cavity; they are then probably absorbed by the body tissues in most cases.

Perhaps the commonest of the faults arising in the ovary is the blood clot. This is usually caused by the rupture of a blood vessel when the yolk sac splits in order to allow the escape of the mature yolk into the oviduct. This rupture may be the result of such abnormal circumstances as a split occurring in some part of the yolk sac other than at the suture line, or a crossing of the suture line by a blood vessel. Ruptures of other tissues may have a similar effect. Blood clots seem to occur relatively oftener during the first laying period of pullets and during the spring period of heavy production than at other times. This is probably due to the extra heavy strain on the egg organs at these times.

The clot of blood adheres to the yolk as it passes through the oviduct, and if it is of good size it may be distinctly seen when candling. A blood clot can be distinguished from other spots by its bright red color and by the fact that it is on the surface of the yolk and moves only with the yolk. A blood clot alone shows as a distinct spot through the shell, not as a diffuse-colored area of the egg. When the egg is opened the clot can be distinctly seen. If it is removed, the egg is suitable for use as food unless otherwise defective. An ordinary blood clot does not color the albumen; if the albumen is colored, the egg is termed a bloody egg.

Because of the presence of blood in these eggs they are often confused with incubator eggs, and customers refuse to use them for any purpose. Hotel stewards require that all their eggs shall be candled for the purpose of eliminating the eggs with blood clots. The producer or dealer should make use of many of them and avoid the waste. It is believed that certain hens have a tendency to produce these clots, and by culling such birds from the flock the percentage of blood-clot eggs can be greatly reduced. Blood clots are probably detrimental to the keeping quality of eggs.

An egg is forced through the oviduct by the peristaltic action of the muscles in the oviduct wall. Sometimes, apparently due to fright, this action ceases temporarily, and the egg is held in the body of the fowl for several days after it is completed. This keeps the egg at body temperature, and incubation begins. If the egg is fertile, the results are disastrous at once. If the egg is infertile, of course the results are not so serious and the egg may be fit for use when laid, depending on the extent to which the egg was infected while being held in the body of the hen.

When an egg has passed through the oviduct and is ready to be laid, a reverse peristaltic action may be incited in some way, and the egg will be forced back up the oviduct until normal forces again push it along its regular course. In this way one yolk may be enveloped with two complete sets of albumen, shell membranes and shell. Three sets have been known to be formed over a single yolk, probably in this way. Sometimes other yolks are met by the ascending egg and the whole is surrounded by one set of albumen, shell membranes, and shell. The first egg, in any case, is usually an abnormally small one, and this may often account for the reversal of the peristaltic forces.

Grains or fragments of other foreign substances may be forced up the oviduct from the cloaca. This has been known to occur, and during the normal return of such substances the oviduct glands have secreted albumen, shell membranes, and shell, forming a complete egg except that a foreign body has been substituted for the yolk.

Due to causes similar to those resulting in yolk substitution, grains and other foreign substances are sometimes found floating in the albumen. If an egg has previously been broken in the oviduct, the broken contents may gradually harden and cling to the oviduct walls. Later they may be-

come detached and pass along with an egg. In this way various forms of dried yolk and albumen may be deposited in eggs; rings of dried yolk and albumen have been observed, as well as various other peculiar shapes.

Intestinal worms are sometimes found in eggs. They apparently gain access to the oviduct from the large intestine and are later included in an egg as it is being formed. These worms vary in size and form, but are usually white in color.

If one yolk drops into the oviduct shortly after another, even though this is due to no abnormal condition of the ovary, the one secretion of albumen may surround both yolks and form a double-yolk egg as previously described. A few cases of triple-yolk eggs, apparently formed in the same way, have also been described. If the yolks are too far apart to be enclosed as one egg, they may still remain connected in various ways. A small amount of albumen with shell membranes and shell, may connect the two complete eggs. The two adjacent chalazæ may be either continuous or separate. Sometimes only the shell membranes connect the eggs, neither albumen nor shell being present.

Eggs are sometimes produced having only a very thin shell or having no shell material at all. Eggs of this type are the result of a condition that may be caused by a lack of lime in the glands of the uterus or by one egg forcing the next egg out of the body of the fowl before the shell can be formed. Soft-shell eggs occur, therefore, most frequently during the period of heavy egg production.

Particles appearing like pieces of liver are often found floating in the albumen. On closer examination these particles seem to be pieces of the dead glands of the oviduct wall, and, since they occur very often, they are thought to be fragments of this waste tissue. In candling eggs it will be noted that meat spots appear very dark and float near the shell. They may be of various shapes or may consist of several very small, floating specks. They lack the characteristic red appearance of a blood clot, and are free from the yolk. When an egg having this peculiarity is broken open, the meat spot is sometimes found attached to one of the chalazæ or it may float entirely free. If it is removed, the egg is satisfactory for use as food unless otherwise defective. Such eggs are treated on the market in the same manner as are those having blood clots.

The oviduct often becomes injured and irritated so that blood is exuded with the albumen, making the albumen appear distinctly bloody. This condition may appear throughout an egg or in certain parts of it. Bloody eggs are commoner with pullets just beginning to lay or during the heavy laying period than at other times, as in the case of blood clots, and are probably due largely to over-exertion of the oviduct. The blood in the albumen is often concentrated about the chalazæ, but this is not always the case. Certain individuals of the flock are generally responsible for all the bloody eggs, and it is well to remove these fowls when they are discovered. It is usually impossible to remove the affected part of the albumen; therefore the egg is useless. Because of this, bloody eggs are a more serious loss than those having blood clots or meat spots.

Sometimes fragments resembling parts of the shell membrane are found floating in the albumen. These are apparently due to slight secretions of the shell membrane glands in the isthmus, which have formed little fragments of membrane that cling to the walls of the isthmus. When the next egg passes through the oviduct, these membranous fragments are carried along and float free in the albumen. They are not detrimental to the quality of an egg, but eggs bearing them are usually discarded because of their suspicious appearance to persons not understanding the cause. The term "tape-worm" is a popular one given by egg candlers to this type of egg, because of its peculiar appearance.

As soon as an egg is laid, the water begins to evaporate through the pores of the shell. The rate at which moisture is lost is influenced by the humidity and temperature of the air surrounding the egg, the rate at which this air is moving, and the structure of the shell and the shell membranes. As evaporation continues, air replaces the moisture within the egg and the air cell is gradually enlarged.

THE WHOLESALE GROCERY FIELD

ALL THE MANUFACTURING AND JOBBING NEWS WORTH PRINTING

CANNED FOODS REVIEW.

By Canticle.

THERE has been a heavy movement into consumption out of dealers' hands of canned foods during April.

The weather has been unusually favorable and the percentage of rain and severe cold weather during the month has been small, consequently the country roads have been good and shipping has not been prevented by danger of freezing in transit.

Therefore, the distribution of canned foods by Chicago and other large centers of population has been enormous, resulting in a heavy reduction of stocks in the hands of canners and wholesalers amounting in some lines to a practical cleanup of the remainder of the 1915 output.

Canned Tomatoes—During the early days of April canned tomatoes "slumped" and there was a decline of 5c per dozen on standard 3s and about that much on standard 2s, but beginning April 17 there was a reaction and the market advanced to \$1.00 Maryland for No. 3 standard tomatoes and 80c for standard 2s tomatoes f. o. b. eastern canneries, and the month closed with higher prices being asked for spot goods.

Indiana canners have practically sold out clean and are not offering any spot goods.

It is the prevailing impression that the short pack and supply will cause active buying for a while and that the buying with gradually put prices up. Some predict that prices on standard 3s will go as high as \$1.25 f. o. b. cannery. Others are more conservative and though admitting probability of an advance do not think that the dollar and a quarter price in first hands will be reached before new packing is available.

Canned Corn—This article is dull and has ruled dull all during the spring. There has been a small advance amounting to about five cents a dozen above the opening price for the season on all grades, but at the close of April there developed some pressure to sell and prices eased off a little. The offerings, however, are very scarce indeed, coming chiefly from New York where packers seem to have some surplus.

Canned Peas—There is a decided improvement in the situation as to this article and the selections to be had at former prices are very unsatisfactory.

Good No. 3 sieve Alaska peas of extra standard or fancy grade are getting hard to find. This size in peas and kind (Alaska) has grown to be the most salable and of largest demand in this market.

It holds its shape and style, is not too mature to be tender and seems to hold its flavor and style better than any other grade or variety and the consumers have discovered that fact. They prefer it to the smaller No. 2 size, which is rather too immature and devoid of substance and flavor.

Canned Apples—The market is dead, dull and dragging. Quite a large carryover is in evidence both in first and second hands and for the reason that cold storage supplies of green apples are superabundant canned apples have not sold well.

The cold storage speculators in barreled apples have stubbornly held their prices so high all during the season that the people could not afford to use them. The retail price on apples has been kept up to from 30c to 60c the dozen and

holders are now suffering from their greediness, being compelled to sell their holdings at a heavy loss.

That situation is not well for canned apples, however, which stand idly and neglected waiting for buyers.

Futures in No. 10 New York winter apples, 1916 pack, are offered as low as \$2.00 f. o. b. New York cannery and some have been sold on that basis.

Futures—The sale of tomato futures has been large this season, influenced by the fact that futures are so much lower in price than spot goods. In corn only those futures have been contracted which are usual and required for wholesale grocers private tables and only minimum quantities have been bought.

The sale of futures in peas has been greatly restricted by the fact that spot peas are enormously cheaper than futures and buyers prefer to buy and carry over at the heavy differences named in prices of spot and future peas.

Contracting for salmon and California fruits has been smaller than usual and altogether the "future selling game" as it is called, has been a meager proposition so far this season.

DRIED FRUIT REVIEW.

Spot and future markets on both apricots and prunes continue to be very strong. The spot market especially on both of these items is in very firm shape. Holdings both here and on the coast are quite a little below normal for this time of the year. Reported damage to the coming crop of both apricots and prunes has created a strong future situation. The spot market on prunes has advanced from the low point easily 1½c per lb. and on futures has advanced from 1½c to 2c per lb. It is estimated that the coming crop this year will not exceed 120,000,000 lbs. as against 200,000,000 normally. It is estimated that the coming apricot crop will not exceed 12,000 tons against 20,000 tons last year. The strength on spot prunes is because of the very limited holdings and the increased domestic demand. Stocks of spot prunes all over the country are very light. There has been quite a little buying in California for replenishing of stocks during the last thirty days. This has materially cut down the coast holdings, and is generally felt that the spot prune market is not only going to be maintained, but that we will see higher values. It is stated that the domestic demand is unusually heavy, in fact fully double what it was a year ago at this same period. While the trading in spot prunes has been very active the reverse is the case on future prunes. The trade are not taking hold at the prevailing future quotations, as the general feeling is that we will see somewhat lower prices later. This depends largely upon developments. If the crop turns out as short as is now predicted, present values will probably remain. If, however, the damage is not so severe we may see lower prices. On the other hand, should we be in position to export usual quantities to Europe, and the crop is as short as now estimated, prices will be materially higher.

Owing to all these uncertainties surrounding the prune situation, the trade for the time being are awaiting developments.

The peach situation remains unchanged for spot goods. Demand is very good—quite a little better than that of a

year ago. Future prices on peaches are materially higher than those quoted for spot and it is the general opinion that today's future prices on peaches will be maintained, as the growers will not dry peaches unless it shows them a profit this year.

The raisin situation remains unchanged. The carryover of Muscatels is about normal. Seedless varieties of all kinds are closely cleaned up, in fact there are no offerings whatsoever from the coast on Seedless Thompsons or Seedless Sultanas, and only limited quantities of One Crown Floated Seedless.

The currant market continues to strengthen in price. Quotations today are around 11½c f. o. b. Chicago for shipment from Greece early next month. Spot quotations are about the same as the quotations for import. Good quality currants are closely cleaned up and the probabilities are we will have an advancing market on this item up to the new crop. May and June are big consuming months on the dried fruit line, especially apricots, peaches and prunes, and the probabilities are with the light holdings we will see further advances on these three items.

MONTHLY SPICE LETTER.

The market has shown very little change during the week. April and May are usually the duller months in the year in the spice line. With any unusual demand during late May or early June, the market is likely to react and higher prices are likely to prevail.

PEPPER.—In fair demand at prices which are slightly easier. Cables, however, for far-off futures continue to quote high prices.

RED PEPPERS.—Are steady and likely to remain firm over the spring and summer months.

CLOVES.—Somewhat firmer. Cables from London show an advance. The heavy consuming season will soon be on and higher prices are probable.

PIMENTO (ALLSPICE).—There is an unusual demand for this article from England at present, which has had a tendency of keeping prices firm here.

MACE.—In fair demand at steady but unchanged prices.

NUTMEGS.—Are in large demand. Nearly every offering made lately has been quickly taken up. The consumption, we believe, has increased. High prices are likely to remain in effect during the spring and summer.

CASSIAS.—China grades are slightly easier. This is due, no doubt, to the large importations just in on the S/V "Daylight." Batavias are scarce. Ceylon cinnamon is firm and in large export demand.

GINGERS.—African is steady. Cochins are firmer. Jamaicas are steady and in fair supply at present.

TAPIOCAS are in fair demand at firm but unchanged prices.

PAPRIKAS.—No special change to report. The better grades of Spanish are in small supply here. Prices in Spain are up ½c.

SEEDS, HERBS, ETC.—Caraway is in big demand and some big lots have been sold during the week. Prices are firm and the tendency is upward. Poppy continues firm and in fair demand. Mustards are unchanged. Turmeric is firm, especially for the Aleppy grade.

FISH MARKET REPORT.

As usual, around Easter, the salt fish market is very quiet. A little action in all items, with the exception of lake fish, which are in light receipt and prices high. During the last week the ice has moved out of the northern ports and it is expected in the near future new arrivals of lake herring will come to hand. However, prices are expected to be high and will probably rule about \$3 to \$3.25 per half barrel Chicago for slime herring.

Split herring are very scarce, indeed, and are now bringing \$7 east. This means \$8 Chicago.

Action in mackerel is very light, indeed; small sizes, which are more desirable, are practically off the market.

The situation on Norwegian canned goods remains unchanged. Prices, if anything, are higher, receipts practically nothing, and demand consequently far from active.

Domestic sardines packed Norwegian style are finding a place for themselves on the market now; prices are reasonable, quality is good, but as it will be several months before the better grade of American sardines are procurable, little can be done on this item in the next few months. There is still some action on white hoop kegs herring, although the stocks are being cleaned up rapidly and no more will come forward until next fall. Dealers who have a trade for this item, would do well to cover their requirements now, before they are entirely sold up.

D. H. LANE COMPANY.

EXPORT SUGGESTIONS FROM GOVERNMENT

The insistent demand for information of foreign-trade subjects has led to the publication of a book of practical suggestions by the Bureau of Foreign and Domestic Commerce, Department of Commerce. These suggestions are not concerned with the sale of any particular lines of goods in foreign markets, but with the vexing problems which sooner or later confront exporters in every line, such as questions of credit, agencies, and packing.

The much discussed question of extending credits to foreign buyers is gone into at considerable length in the bulletin, as there seems to be a disposition on the part of American exporters to regard as permanent the present short-term and cash business with countries that previously demanded long credits. A special warning on this subject is directed at manufacturers who prefer to do their foreign business direct: "Foreign buyers who are willing to pay you cash now—especially is this true of European buyers—will not do so after the present extraordinary conditions have ceased to exist. You must face the fact that if you intend to do a direct export business you must be prepared to finance your shipments at 90 days sight or longer. This statement does not mean that you cannot do an export business on any other basis. It means that if you want your money in advance or cash at seaboard you must do business through a middleman. This cannot be put too strongly, as there is no other alternative."

The absurdity, under present conditions, of turning over Latin-American business to representatives of European concerns without a guarantee of continued representation when the war is over is pointed out. A striking example is cited in connection with the sale of stearic acid in Central America. This product was formerly supplied in considerable quantities, but some years ago a European house put a permanent representative in the field and captured practically the entire trade. The war made it impossible to fill orders from the home plant, so the agent has been buying in the United States. Some American firm is doubtless congratulating itself on the profitable business it is doing, not realizing that it is merely assisting a foreign competitor to hold together his customers until the war is over. The American firm is missing a golden opportunity to put its own man in the field, get in touch with the native market, and build up a permanent and profitable business.

There is a wealth of similar practical information in the bulletin, under the following headings: Export Policies, Representatives and Agencies, Finances and Credit, Quotations, Postal Services, Correspondence and Translations, Co-operation with Consuls, Packing, Advertising, and General Trade Extension. Contributions are included from consuls, commercial attaches, traveling special agents, from special agents in charge of district offices of the Bureau of Foreign and Domestic Commerce, and from Dr. E. E. Pratt, Chief of the Bureau.

The title of the new bulletin is "Expert Trade Suggestions," Miscellaneous Series No. 35, and it contains 141 pages. Copies may be purchased at the nominal price of 15 cents each from the Superintendent of Documents, Washington, D. C., or from the District Offices of the Bureau.

Next Decade for the Canner—What Future Holds for Progressive Packers—Consumer To-Day Receives More Than Her Share of Benefits—Smaller Tins, Better Quality to Come

By GEORGE W. COBB
Assistant Sales Manager, American Can Co.

I AM going to talk to you about the future of the tomato. She has had a shady past. Will she have a bright future? What, if anything, will change her mode of life?

I will not go back more than ten years, i. e., to 1906, when the Pure Food Act was enacted. Undoubtedly that act marked an epoch in the foods of this country, especially canned foods, and more especially the canned tomato.

Up to this time the good that has come out of that act has been for the welfare of the consumer. The manufacturer has not been properly rewarded. The consumer is getting more at no higher cost. The canner has paid the difference. Everyone thrives and grows fat on canned foods except the canner. He loves his business so well that he does it for love. But still I believe in the future, even of the canned tomato.

I believe that knowledge must take the place of—shall I say ignorance, or shall I say insufficient knowledge? In the coming ten years—and I want to be perfectly safe, so I am going to talk about 1926—I believe that some things by the law, that cruel law of the “survival of the fittest,” will take place, and that some will be doing business in the canning line and others will not. I believe that those who are at that time doing business, if still living, will have solved certain problems which, at this time, have not been solved.

In the first place, the canner of ten years hence, will not attempt to do business with insufficient capital. I believe this, as much as any one single thing, is the cause of failure and trouble for those who are doing business in this day. I believe that better and more efficient management will be at the helm. I believe the canners of ten years hence will know what their costs are. Some never know their costs. Others know the costs a year afterward, in time for the funeral. When all canners know their costs all the time there will be no criticism that canned tomatoes are selling below cost. No man intentionally sells below cost if he knows actually what those costs are. The day of so-called gentlemen's agreements has gone by. It has been found that there are not enough gentlemen in any industry to make an agreement which will hold.

There are just two axioms that every man going into business should bear in mind. One is that he cannot get all the business. That also has been tried. The other is there will always be those who will sell below you.

Within the next ten years the canners will come to realize what can be accomplished through their own organization. The National Canners' Association should be the clearing house of the canning industry. Through it this matter of advertising is, to my mind, going to be solved. The National Canners' Association, up to this time, has been gaining confidence of the authorities at Washington.

There is coming, in my opinion, within the next ten years a movement to gain the confidence of the 100,000,000 people in this land. That is going to mean a new day for the canning industry.

The National Canners' Association is working a game of confidence and not a confidence game. We must bear in mind that, after all, the canners' customers are not the brokers' the wholesalers or retailers, but they are, after all, the millions of people in this country. The jobbers do not eat the goods, and they would have no use for them if the 100,000,000 people didn't eat them. It is the people to whom you must appeal.

High standards of eating have been and are still being established, and it is up to the canner to meet those standards. All insist that they shall have not only quality, but that food shall be handled in a manner which meets their own ideas.

It is going to cost money for sanitation. It is going to cost money for inspection of the raw product. It is going to cost money to see that your employes are always neat and attractive, though the latter is sometimes more difficult than the former. All those things cost money, but the consumer is willing to pay for it, and will have to pay for it. Up to this time the canner has stood for such improvement as has been made.

All this leads up to an idea I have, that the size of the can, the standard No. 3, which is used so extensively for this article, is too large. You are trying to give too much for the money. If all these expenses are to be added, too, as they must be, it will mean that some size even smaller than No. 2½ will come into vogue in the next ten years. I am not sure but what in the next ten years it is going to cost so much to pack even a No. 2, to meet the views of the American public, that that size will come into general use. Perhaps the No. 3 will be the 15c seller. Please remember, I am talking only of standards. There will always be demand for fancy.

You cannot add to the expenses which you already have and still give as much in quantity. Eighty cents f. o. b., or thereabouts, is, practically, the limit which can be obtained by the manufacturer for an article which is going to the housewife at 10c. She has become educated to buying something for 10c. If she wants all this quality and all these frills she is going to get it, and you are going to give it to her, but you are not going to give her as much of it.

Please understand, I am looking ten years hence, and I have nothing radical to suggest. I have been, the most of my life, a canner, and know how difficult it is to meet the theories and whims of the people who eat; but those theories and whims must be met, nevertheless.

I was recently in a large manufacturing plant where, in every room and on every floor, was hanging on the wall a sign: “Safety first: Rule No. 1, Quality: Rule No. 2, Service; Rule No. 3, Cost.”

It seems to me that there is a sermon in those three words. Quality and service are for the benefit of our customers. Cost is an after consideration in so far as they are concerned, but in so far as the manufacturer is concerned, it is of vital importance.



Food News from the East



NEW YORK, April 29.—It may be necessary and desirable that maintained prices on advertised specialties need special enactment along the lines of the now famous Stephens bill, but scarcely a month passes without evidence accumulating that the courts are more and more crystallizing an opinion that a manufacturer who is willing to refuse to sell price cutters can do his own police work with perfect legality and a large measure of effectiveness.

The first of the famous Frey trio of test cases has been on trial in Baltimore lately and though on the first trial the jury disagreed, an immediate retrial, the following week, resulted last Thursday in a complete victory for the manufacturer in the case—the Welch Grape Juice Co. The jury was out only five hours and returned answers to the framed questions, all favorable to the manufacturer.

It will be recalled that Frey & Co., Baltimore wholesale grocers, not averse to price cutting and determined to fight for its rights to do as it chose with goods it had bought and paid for, was cut off from a supply of goods by the Welch Co., the Beechnut Packing Co. and Cudahy & Co. It sued in the Federal court at Baltimore, contending that the agreement as to resale price was contrary to the Sherman law, while the refusal to sell it on a jobbing basis was discrimination under the Clayton act. Much interest has been felt in the case, as it was the first genuine test of the Clayton act.

The case was submitted on two counts. The first rested on the question of whether or not there existed, in the light of the first clause of the Sherman anti-trust law, an agreement, understanding or combination, between the Welch Grape Juice Co. and its jobbing distributors, by which the resale price of its product was fixed, and if such were the fact, whether the grape juice company cut off Frey because he cut the resale price and refused into such illegal combination, agreement or understanding.

The second count was under the Clayton act and referred to the jury the question of whether or not the Welch Company had discriminated against Frey by returning a certified check accompanying its demand for grape juice, in January, 1915, accompanied by a letter in which the company not only refused to sell him at the jobbing price but offered to let him have goods if he wished them, at the retail price. This letter, it was contended by the Welch company, was simply a polite way of refusing to deal with him as a jobber.

The Frey company has always insisted that it means to test the merits of this case to the finish. It still has two similar cases pending, respectively against the Beechnut Packing Co. and Cudahy & Co., and whether it will rest its fate on the trial of those cases or carry an appeal to the Supreme court, is not yet stated.

FIXED PRICES UPPERMOST.

But this is only one phase of the fixed price agitation; there have been no end of other episodes in its evolution during the past month, due largely to the activities of the Fair Trade League and the open controversy it is provoking in many quarters; also because of the referendum of the National Chamber of Commerce now being taken and because the methods have become so intensive as to draw sparks in many quarters.

The league has retained as its field "agitator" Charles E. Lavigne, formerly investigator for the U. S. Department of Commerce and more recently connected with the New York "Tribune's" honest advertising propaganda. With Secretary Whittier, Vice President Galloway and Mr. Lavigne on the trail, things are coming pretty lively.

But there is a growing suspicion that the fighting is being overdone and the measure has become bigger than the principle it is supposed to stand for, viz.: the right of a specialty maker to dictate and enforce the retail price of his product. Incidental to its stormy career in congressional seas there have been tacked onto the bill amendments and provisos till

it has become more a plaintive petition for a right to maintain prices than it is a declaration of a right which many think already exists under the common law.

There is a feeling that if such a right does exist, it is very undesirable to be begging Uncle Sam for it, and, as a price for the concession to allow so large a measure of governmental supervision in the operation of the plan. Take Fred Mason, head of the big Shredded Wheat Co., as an instance. In an interview he said:

"I believe fully in price maintenance and the right of a specialty maker to control his goods so long as he observes his responsibilities toward square trading as keenly as he enjoys his privileges. But I do not think he needs to, nor can afford to buy a legal status for that right, at the cost of turning the management and supervision of his business over to the government. Let him manage his own affairs, and regulate the fairness of his distribution in accordance with his own ability; subject at all times to free competition. Let it be established—either by decree of the Supreme court or by special amendment of the Sherman law—that such control is not what the Sherman law means by conspiracy and agreement in restraint of competition and we have all that is needed.

"I would not defend for a minute any agreement among competitors to restrain competition, nor any measure that would foster monopoly, but I do believe that the common law and common justice already gives rights to a manufacturer sufficient to take care of his own troubles. To ask new rights at the cost of having unknown and untried officials digging into one's business secrets, determining one's prices or adequacy of profits, spying into all the details of one's business, is far more dangerous than any of the fancied wrongs of price competition; even of price cutters. True, we occasionally have price cutters, but our company has never found it necessary to have Uncle Sam step in and correct it for us."

And there are many other manufacturers who feel the same way about it, the more they note the paternalistic concessions in the latest forms of the Stephens bill. Unfortunately, too, the "pilots" in charge of the measure are getting into animosities which are a source of disgust to many friends of price fixing.

DR. GALLOWAY SUES S. & H. CO.

Not exactly a part of the Stephens bill propaganda, but none the less allied to it because of the common interest of the Fair Trade League in it, comes the trading stamp issue. Ever since the Supreme Court of the United States has decided that Washington and Florida had a constitutional right to tax trading stamps out of existence, the whole subject of suppressing trading stamps by state and municipal taxation has been to the front.

The Fair Trade League undertook to take a referendum vote to decide how the trade sentiment stood on the subject and got out blanks which it sent broadcast to several thousand merchants, asking certain questions. Dr. Lee Galloway of the New York University was in charge and things went lovely till the returns showed a tangle. The Sperry & Hutchinson's "fine Italian hand" appeared, sending in returns which it said had been sent to it by some of its clients "by mistake." The league accepted these blanks and entered them in the compilation.

Then it suddenly appeared that there were two sets of blanks and that the trading stamp folks were "assisting" their friends how to answer the Galloway blank, with a set of "suggested replies," incidental to which it had furnished certain blanks exactly like the original. The tangle "queered" the authenticity of the whole canvass and Professor Galloway hastened to sue the trading stamp company and President Caldwell for \$50,000 damages, for injury to his professional standing and dignity. The suit is on file in the Federal court.

HOW TO CUT PRICES SUCCESSFULLY.

Another interesting episode in the maintained price controversy is the recent address of Sylvan L. Stix of the big jobbing house of Seeman Brothers, before the Tri-State Wholesale Grocers' Association at Reading, Pa., and the experimental figures he has since made on the subject.

Mr. Stix is firmly friendly to protected prices on specialties, but at the recent Reading convention he startled the wholesalers by pointing out that "where the manufacturer of a heavily advertised specialty refuses to make any attempt to establish fair market conditions, it is up to the independent retailer to take a leaf out of the book of the chain store man and meet him at his own game."

And then Mr. Stix proceeded to point out how "price adjustment," if done carefully, might be the very thing best calculated for the retailer faced with non-service, chain store competition. He pointed out that heavily advertised specialties represent on the average about 10 per cent of the retailer's business and that a cut of 10 per cent (which he thought would be ample to meet competition) on 10 per cent of the volume, would make a difference of only 1 per cent in profits, which would be more than made up by saving or increasing the volume of business. He computed this on the idea that gross retail profits are about 22 per cent and a 10 per cent increase through such "pricing" would add nothing to the cost of doing business.

Working on this basis, Mr. Stix has recently worked out the problem on an assumed normal volume of business of \$1,000 a year, from at least six different angles of action, and finds the interesting results. The six angles referred to are as follows:

- First—The retail grocer who does a volume of \$1,000 under normal conditions—by that we mean the volume of business that his location and general conditions would naturally produce, without cut prices or other stimulation.
- Second—The retail grocer who would do a volume of \$1,000 under normal conditions, but who increases his volume of business of 10 per cent without reducing prices, his percentage of gross profit and amount of expense remaining unchanged.
- Third—The retail grocer who would do a volume of \$1,000 under normal conditions, but who, owing to competitive conditions, reduces his selling prices on popular proprietary goods 10 per cent and increases his normal volume 10 per cent.
- Fourth—The retail grocer who would do a volume of \$1,000 under normal conditions, but who does not reduce the selling price on popular proprietary goods 10 per cent to meet competitive conditions and who, consequently, reduces his normal volume 10 per cent.
- Fifth—The retail grocer who would do a volume of \$1,000 under normal conditions, but who does not reduce the selling price on popular proprietary goods 10 per cent to meet competitive conditions. The consequent possible loss of 22 73-100 per cent volume would find his profits entirely wiped out.
- Sixth—The retail grocer who would do a business of \$1,000 under normal conditions, but who reduces the selling price on popular proprietary goods 10 per cent to meet competitive conditions and thus retains his volume of \$1,000.

The results are as follows:

	Volume.	Gross Profits.	Expenses.	Net Profits.
First—				
Normal volume under normal conditions ..	\$1,000.00	\$220.00	\$170.00	\$50.00
		(22%)	(17%)	(5%)
Second—				
Volume increased 10%, expenses and percentage of gross profit remaining unchanged	\$1,100.00	\$242.00	\$170.00	\$72.00
		(22%)	(15.46%)	(6.54%)

Third—				
Increased profits based on possible 10% increase in volume—due to cutting popular proprietary products 10%	\$1,100.00	\$231.00	\$170.00	\$61.00
		(21%)	(15.46%)	(5.54%)
Fourth—				
Possible 10% reduction in volume due to not meeting competitive prices	\$900.00	\$198.00	\$170.00	\$28.00
		(22%)	(18 8/9%)	(3 1/9%)
Fifth—				
Possible 22 73/100% reduction in volume due to not meeting competitive prices...	\$772.73	\$170.00	\$170.00	\$0.00
		(22%)	(22%)	(%)
Sixth—				
Volume maintained and possible saving of profit due to revised pricing as against partial or complete loss of profit due to not meeting competitive prices	\$1,000.00	\$210.00	\$170.00	\$40.00
		(21%)	(17%)	(4%)

ROSS COUNTERS SHREDDED WHEAT.

Readers of this correspondence are already acquainted with the controversy between the Shredded Wheat Co. of Niagara Falls and the Ross Food Co. recently established at Batavia, N. Y., by Andrew Ross, well known as former sales manager of the Kellogg Toasted Corn Flake Co. The Shredded Wheat Co. brought an action against Ross and his associates in the Federal court in Connecticut for unfair trading, in having imitated its well-known biscuit in such a way as to confuse the public; also with having conspired with jobbing grocers to sell the new biscuit in similar questionable manner. The result of the suit has been that, with jobbers everywhere scared by fears of being joined in the case, Ross has been unable to market his goods and his factory has been shut down several months, pending a decision on the Connecticut suit; a culmination that did not appear very likely to come soon, wherefore it meant the ruin of the Ross business. Ross "came back" at Shredded Wheat last week in the form of a complaint filed with the Federal Trade Commission, at Washington, alleging that the Shredded Wheat Co. was resorting to reprehensible practices and conspiracy to put him out of business. The allegations of the complaint charge that the Shredded Wheat Company prevented the Ross Company from securing machinery for its factory through the enforcement of a contract which the Shredded Wheat Company had with the manufacturer of such machinery by the terms of which it was provided that the company should not make machinery of this description for any company other than the Shredded Wheat Company. The charge is also made that the Shredded Wheat Company had its employes or secret agents spy upon the business of the Ross Food Company; bribed employes of a railroad to disclose to it the names of persons to whom the Ross Food Company was selling its product, and, having obtained this information procured wholesalers and jobbers who had purchased or contracted to purchase the product of the Ross Food Company to cancel their orders. It is alleged that this was accomplished by threatening to institute legal action against any dealer who handled the product of the Ross Company and by misrepresenting the quality of the company's product. It is also charged that the Shredded Wheat Company began, and is continuing to prosecute, a vexatious suit against the Ross Food Company, claim-

ing exclusive rights as to certain matters which had been covered by patents owned by it, but which had expired approximately six years prior to the institution of the action. It is also claimed that the suit was brought in a court which was without jurisdiction to consider it.

The complaint also charges that the Shredded Wheat Company caused wide publicity to be given to the bringing of this suit and incorporated in articles thus circulated false and libelous comments in reference to the company, its officers and product. The complaint states also that the Shredded Wheat Company informed the customers of the Ross Food Company of this suit and threatened them with similar suits if they persevered in handling the product of the Ross Company. The further allegation is made that the Shredded Wheat Company endeavored to prevent the Ross Company from securing advertising space and publicity by threatening to withdraw its advertisements from such papers as published the advertisements of the Ross Company.

STATE TO WARN OF ADULTERATION.

The organized retail grocers of this state are strongly urging the enactment at Albany of a new bill, originated by the Utica retailers, to relieve retail grocers of annoyance at the hands of pure food prosecutors. The bill is an amendment to the state agricultural law and proposes in the general clause creating the department that it shall be a part of the duty of the commissioner to issue and publish a notice, whenever conditions warrant it, stating that certain food products sold in the state are adulterated with certain ingredients. When taking samples for analysis, duplicates must be taken in the presence of at least one witness, one of which must be tendered to the manufacturer or vendor at the time of the sale. Purchasers must be notified of adulteration by statement on the invoice.

Then the following clause is added to the statute:

A manufacturer or a wholesale vendor of food products shall inform the purchaser at the time of sale by stating in the invoice the name and character of the adulterant, if any, in the product sold under such invoice. When the container of such product has been properly marked and the statement has been made in the invoice, as herein provided, the manufacturer or wholesale vendor of such product so sold shall be absolved of all liability in case such products are thereafter sold in violation of law.

A SENSIBLE JUDGE.

The sanest bit of judicial interpretation on record in recent times is the recent decision of Municipal Judge Noonan of Buffalo, who refused to convict a butcher under the cold storage limitation law, for selling meat held beyond the legal time in cold storage. The judge held that arbitrary time limits did not change good meat into bad and if the meat sold was perfectly wholesome he did not believe an offense had been committed.

"When a health law is challenged as unconstitutional on the ground that it arbitrarily interferes with personal liberty and private property without due process of the law," said Judge Noonan, "the courts must be able to see that it has some relation to the public health, and that the public health is the end actually aimed at. Under the guise of police regulations, personal rights and private property can not be arbitrarily invaded, and the determination of the Legislature is not final or conclusive.

"If that part of the rule laid down, that the public health is the end actually aimed at, is good law, the section in question must be declared unconstitutional, because its real purpose is not to protect the health of the people by seeing that wholesome food products are not put on the market, but its real reason for being is to force upon the market any products that any person may have in cold storage after a definite length of time, and thus force the owner thereof to sell when the market is unfavorable and generally at a loss.

"The cases at bar are glaring examples of the unreasonableness of such a statute. The defendant McFall had the chickens in storage for his own private use, while the defendant Tuttle was a dealer in poultry; yet upon the mere fact that

this poultry had been in storage for more than ten months the defendants were compelled summarily to dispose of the same, regardless of the fact of its unfitness for use.

"The state offered no evidence upon the question of fitness. It simply proved the *prima facie* case as required by statute and rested. The overwhelming proof on the part of both defendants in question was that the food was absolutely wholesome. Evidence was introduced showing experiments that had been made with great care by the Health Department of the city of Buffalo, which showed that poultry kept in cold storage was absolutely wholesome long after ten months.

"I do not think that the state can successfully contend that poultry properly kept in cold storage is unfit for use in ten months. If it is actually unfit for consumption the Health Commission has the power to destroy it under the section above referred to, and section 337 is consequently unnecessary and need not be invoked by the Health Commissioner in order to protect the community."

STATE TO SET UP MONOPOLY.

Men who have long been reminding the trade that overmuch meddling with legislation is bound to result in out-and-out socialism are astonished at the wide-open proposition of an official commission which has been studying the milk question in Rhode Island and has now reported a plan whereby it would have the state take charge of milk distribution exclusively, dictate how it shall be raised, kept, graded and shipped, then have cities and towns do the distributing municipally and finally pass a law prohibiting any private party from selling milk.

The commission would even go so far as to fix the price and even meets and challenges the anticipated criticism that it is paternalistic.

"Estimates made by experts," says the report, "show that the entire cost of delivery, from the farm to the consumer's door, should not exceed 2½ cents a quart. In fact, Dr. C. E. North, director of the North Public Health Bureau of New York city, believes it will not exceed the sum of 2¼ cents.

"The prices of 9 and 10 cents a quart to be paid by consumers, suggested by the commission, therefore, would allow a good margin of profit to the city or town as reimbursement for interest on the capital invested and on the expense of management of the central bureau system, so that no deficit, it is believed, would be incurred."

And then the commission goes on the defensive with the following: "Your commission is aware that the cry of socialism may be raised against the proposed plan, but aside from the fact that no member of the commission believes in socialism, there is a united belief that milk has become so great a necessity in modern civilized life, and yet is so generally poor in quality, that the time has come when under the police powers of the state the community should supersede the individual in the sale of milk.

"The plan aims to deprive the individual of the right to sell a food dangerous to health by having the community itself assume the charge, not of the production of milk, which would be really socialistic, but of the distribution of it after a proper grading and pasteurization. Just as the individual has been refused the privilege of a private well or a private cesspool or privy, because these are a menace to health, so the state may properly withdraw from individuals the privilege of furnishing ungraded and unclean milk, by insisting on proper standardization, pasteurization and distribution, for the sake of the health of its citizens."

MODEL STAMP LAW.

Taking its cue from the recent decision of the Supreme Court, the state laws taxing trading stamp companies and retailers giving trading stamps in their business out of existence, is perfectly constitutional, the National Wholesale Grocers' Association has decided to take a hand in helping the retailers shake off their economic tormentor.

In accordance with a vote at the recent meeting of the Executive Committee of the National Wholesalers, the counsel, Dana T. Ackerly of Breed, Abbott & Morgan, has drafted a new statute, following very rigidly the findings of the Su-

How do you feel about Coffee?

It is very seldom any physician finds it advisable, due to some abnormal condition of the patient, to recommend the discontinuance of its use—isn't it? Yet some advertising makes it a horrible bugaboo. In the light of science such attacks are funny, to say the least.

This is to remind you, when you hear Coca-Cola spoken of slightly by the uniformed, that

Coca-Cola

TRADE MARK
REGISTERED

and coffee are closely analagous. Both get their refreshing qualities from caffeine—only Coca-Cola contains less caffeine than does coffee. Both are natural stimulants that have no depressant after-effects. Both are universally popular. Neither is habit-forming in the true medical sense.

We recommend Coca-Cola to you, during a fatiguing day.

A Comprehensive Treatise

on Coca-Cola will be sent on request. It contains authoritative facts and figures relating to the composition and dietetic value of that delicious beverage.

THE COCA-COLA COMPANY
ATLANTA, GA.



preme Court and Secretary Beckmann has sent it to every state in which the legislature is in session, with a strong request to the wholesalers in those states, to do all they can to bring the law into existence.

The law is as follows, as proposed by the wholesalers:

"An act relating to the use and* furnishing of premiums, prizes, stamps, coupons, tickets, certificates, cards or other similar device, for or with the sale of goods, wares and merchandise and providing a penalty for violation thereof.

"Be it enacted by the Legislature of the State of —:

"Section 1. Every person, firm or corporation who shall use, and every person, firm or corporation who shall furnish to any person, firm or corporation, to use in, with or for the sale of any goods, wares or merchandise, any stamps, coupons, tickets, certificates, cards or other similar devices, which shall entitle the purchaser of such goods, wares or merchandise to procure from any person, firm or corporation, any goods, wares or merchandise, free of charge or for less than the retail market price thereof, upon the production of any number of said stamps, coupons, tickets, certificates, cards or other similar devices, shall before furnishing, selling or using the same, obtain a separate license from the — of each county wherein such furnishing or selling or using shall take place, for each and every store or place of business in that county, owned or conducted by such person, firm or corporation, from which such furnishing or selling, or in which such using shall take place.

"An applicant for such license shall pay to the county treasurer of the county for which such license is sought the sum of six thousand dollars. Receipt therefor shall thereupon be issued and upon presentation thereof to the of the same county, he shall issue to the applicant a license to furnish or sell, or a license to use for one year the stamps, coupons, tickets, certificates, cards or other similar devices herein mentioned. Such license shall contain the name of the grantee thereof, the date of its issue, the date of its expiration, the town or city in which and the location at which the same shall be used, and such license shall be used at no place other than that mentioned therein.

"No person, firm or corporation shall furnish or sell to any other person, firm or corporation to use in, with, or for the sale of any goods, wares or merchandise, any such stamps, coupons, tickets, certificates, cards, or other similar devices for use in any county in this state, other than that in which such furnishing or selling shall take place.

"Section 2. Every person, firm or corporation who shall offer or deliver with goods, wares or merchandise bargained and sold or to be sold, any premium or prize or any article of value in the nature of a premium or prize or who shall sell or give or offer to sell or give any goods or other article or articles of value in the nature of a bonus, prize or premium in consideration of the purchase of or agreement to purchase any goods, wares or merchandise, or who shall sell or offer to sell any article of value in the nature of a bonus, prize or premium in connection with the sale, or offer to sell, of any goods, wares or merchandise and as an inducement to purchase such goods, wares or merchandise shall before performing such acts, or any of them, obtain a separate license from the proper official of each county in which such offering, selling or delivering shall take place.

"An applicant for such license shall pay to the county treasurer of the county for which such license is sought the sum of six thousand dollars. A receipt therefor shall thereupon be issued, and upon presentation thereof to the — of the same county, he shall issue to the applicant a license to offer or deliver or sell for one year, premiums, prizes or articles of value as inducements in connection with the purchase or sale of goods, wares or merchandise. Such license shall contain the name of the grantee thereof, the date of its issue, the date of its expiration and the name of the county in which such acts shall be authorized.

"Section 3. If any clause, sentence, paragraph, or part of this act shall for any reason be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder of the act, but shall be confined in its operation to the clause, sentence, paragraph

or part thereof directly involved in the controversy in which such judgment shall have been rendered.

"Section 4. Any person, firm or corporation violating any of the provisions of this act shall be guilty of a misdemeanor."

CREAM OF WHEAT IN A TANGLE.

There is a growing suspicion that when the Cream of Wheat Co., incidental to the suit of the Atlantic & Pacific Tea Co., placed on record with the court, the statement that its product was nothing but "purified middlings," such as any one could buy who wanted to, because it used only one per cent of the available supply, it made a prodigious blunder. At any rate, the big chain store system has taken it at its word and played a game one degree better than the ordinary private brand substitution game.

In all the stores of the big chain system there are now posted signs entitled, "Why We Do Not Sell Cream of Wheat," and explaining that it proposes to sell "Grandmother's Wheat Farina," which is not "just as good," but identically the same thing as Cream of Wheat. In part, the circular reads:

"For years we have been buying Cream of Wheat from the Cream of Wheat Company, selling it in our stores at a price that enabled us to make a satisfactory profit.

"The Cream of Wheat Company took exception to the price for which we were selling it in our stores (12c) and would not do any further business with us direct.

"We have therefore decided to discontinue the sale of their merchandise and have placed on the market Grandmother's Wheat Farina, a product known as purified middlings.

"The Cream of Wheat Company claim that Cream of Wheat is nothing else than purified middlings of which they sell less than 1 per cent of the entire output, and that any one can buy the same product providing they are as careful in their selection as the Cream of Wheat Company are in theirs.

"We have exercised every care in the selection of the purified middlings that we are selling under the name of Grandmother's Wheat Farina, not a substitute, but as the very same thing which the Cream of Wheat Company sell as Cream of Wheat.

"Our price is only 10c a package; the net contents is one pound and 12 ounces, and the same weight as Cream of Wheat.

"It is the duty of every housewife to give our Grandmother's Wheat Farina a fair trial, if for no other reason than to discourage the idea of manufacturers that they can control the retail price of their product.

"We guarantee that you will be pleased with Grandmother's Wheat Farina, that you will find it to be the equal of Cream of Wheat, and if you do not, bring the package back and we will gladly refund you the entire purchase money, no matter if you have used one-quarter or one-third of the product."

THAT BEEF STEW CONTRACT (?).

"That Beef Stew Contract," which has had the big canners of the country by the ears for the past three months, is still hanging in the air and the rosy hopes of a few weeks ago, based in the untold millions of profit, are fading in a deepening dusk. It all comes because the "official negotiators" who were to have a British governmental credit of \$91,000,000 deposited in the Bank of Montreal as the basis of an intricate system of master contracts and sub-contracts, which had been signed and bonded, have not done so.

That there was reasonable chance of the thing coming through as planned can not be denied, but when big business transactions are predicated on hopes rather than cash, things are likely to vanish into thin air. There are still some who contend that the credit will yet be placed in the bank and made available, but most of those involved have given up hope and retired very much crestfallen at the collapse of their dream. The contract called for 600,000,000 cans of "boiled dinner" of a special formula, deliveries to start 40 days after the establishment of the credit. At this writing it is regarded as the biggest joke of the year.

WHY SACCHARIN WON

The Long, Contested Suit of the Monsanto Chemical Works of Saint Louis, Manufacturers of Saccharin, Is Finally Decided in Its Favor.

The Supreme Court of the State of Missouri in handing down its *unanimous* decision that Saccharin is not deleterious to health, and declaring null and void the statute prohibiting its use recognized the principle that the amount used must be considered. This, the Supreme Court of the United States also did in its decision in the famous Bleached Flour case.

An excessive use of anything is harmful, whether it be sugar, salt or water.

SACCHARIN is much more desirable than sugar as a sweetening agent for soft drinks from any view point: (First)—Healthfulness; (Second)—Economy.

In using SACCHARIN the danger from the use of sugar is eliminated, and the infinitesimal amount of SACCHARIN that is required to sweeten cannot possibly be harmful to any one, either adults or children.

Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

Use SACCHARIN to sweeten and do not hesitate to declare its use on the label. **Such declaration stamps your goods as being healthful.**

MONSANTO CHEMICAL WORKS

Manufacturers of Saccharin

ST. LOUIS

Branch: Platt and Pearl Streets, New York

At the annual election of the new exchange tomorrow, it is expected that the following officers will be elected: President, Harry Dowie; first vice president, H. D. Wheeler; second vice president, B. Titman; third vice president, H. E. Coffin; treasurer, Louis Wisansky. Board of governors—Wm. O. Saxton, Jas. E. Lasher, U. W. Meloney, Benj. W. Musser, Geo. H. Nellis, Sam'l Silber, Samuel Blick, H. Atlas, B. Gabriel, E. H. Van Ronk. H. D. Wheeler, who has done a large part of the work incident to organization, declined nomination as president.

EGG TRADE BEING SCRAMBLED.

If the American egg had been half as much agitated as the egg trade of this region has of late, it would be nicely and irretrievably scrambled. First of all, the New York Butter and Egg Exchange, formed to capture the egg business away from the old Mercantile Exchange, has started business and shows signs of making good its threat. The exchange started business on April 17 and has since been doing a business of about 3,000 cases a day, while the old exchange managed to sell only about 250 cases a day. The new exchange is very popular by reason of its "open-door" policy of posting all transactions and leaving them up all day for everyone's inspection. By the old exchange system, the great bulk of egg buyers were unable to know of actual exchange transactions at first hands.

ANOTHER EGG INVESTIGATION.

Next in order, comes another investigation of the "Egg Trust". This has been a favorite form of legislative pastime for many years past and since the legislature was willing to rake up another \$25,000 for a junket, the willing workers will probably have a nice time. The resolution in substance sets forth what the committee will be expected to find, in return for its free junket. It reads in part as follows:

"Whereas, the distribution of milk, butter, eggs, poultry and live stock produced in this State is controlled by combination and monopoly of dealers and manipulation of prices to such an extent as to reduce production, and in such manner as to impair the quality and unduly enhance the prices to consumers; and

"Whereas, such practices are becoming more and more aggravated and result in discouraging agriculture, reducing production, depressing the value of farm lands, and in increasing the cost, while lowering the standard of living;

"Resolved (if the Assembly concur), That a joint legislative committee be, and the same is hereby constituted, to consist of four Senators and four Members of Assembly, to inquire into such conditions;

"Resolved, That such committee be hereby authorized to sit anywhere within the State, to choose a chairman from among its own members, and employ a secretary, counsel and such other assistants as may be needed, to take testimony, subpoena witnesses, and compel production of books, documents and papers, and otherwise have all the powers of a legislative committee;

"Resolved, That such committee, on or before February 1, nineteen hundred and seventeen, report the result of its inquiries to the Legislature, together with such proposed legislative measures as it deems advisable to carry its recommendations into effect, etc., etc."

TO PROSECUTE CHICKEN STUFFERS.

Another agitation in similar circles is the impending prosecution of the "chicken stuffers"; in other words the rascals who have been starving live poultry arriving in town till after weighed and then feeding the birds sand and red pepper, with plenty of water and various solid or indigestible compounds to increase the weight something like 20 per cent. It has long been a more or less open abuse, but lately State Commissioner Dillon and Assistant Attorney General Kaminsky have been gathering evidence to lay before the grand jury and report says they have plenty of evidence to disclose the fraudulent practice and expose those who have been playing it.

SENSIBLE MARKET PLANS.

Commissioner Joseph Hartigan of Mayor Mitchel's bureau of weights and measures, already well known as a safe and sane ally of the legitimate business man in many of the agitations affecting market schemes, has persuaded the mayor that the time has come to abandon a lot of the wild ideas of having the city set up opposition to taxpaying merchants and to adopt a policy of co-operation.

As a result, Mayor Mitchel has been in conference with representative grocers and marketmen concerning the notorious Mills bill at Albany, which would set up city-owned markets and an elaborate propaganda for direct trading between producers and consumers. It appears that there has been shown so much and such intelligent opposition to the plan that even Senator Mills has abandoned the measure and it will die in committee.

Mayor Mitchel has concluded that what is wanted is a city market department which will be free from paternalism, yet which will furnish consumer and trade alike with reasonable supervision and control.

The effort of Mayor Mitchel and Commissioner Hartigan is to evolve some form of practical supervision of markets, restaurants, hotels and other sources of food supply which will lend the city's support to the protection of sanitation and honest trading without indulging in any fanciful paternalism, such as most of the proposed market measures have presented.

It is understood to be the aim of the conferees to unite all city departments having to do with foods and food supply into one general unit, suitably organized and performing more or less conflicting functions now performed by the Departments of Finance, Dock and Ferries, Highways, Health and the Borough presidents. So far as these have to do with food supply—food qualities and inspection, food premises, restaurants, hotels, etc.; sanitation of grocery stores and markets, cold storage warehouses and receiving depots and docks—it is thought the relation is close enough to allow for reasonable co-ordination, greatly to the increased efficiency of the city's guardianship of the food eaten by the people of New York.

It is said that Mayor Mitchel recognizes the reasonableness of the objections offered by private owners of store property to having the city for a competitor and the truth of the claims that there is private enterprise and capital enough at hand, if properly encouraged and supervised, to furnish the people all the marketing efficiency they need.

TO RESTORE NEW ENGLAND SALMON.

George H. Graham of the Massachusetts' Fish and Game Commission, has been visiting the great salmon streams of the Northwest and has come to a conclusion that there is no reason why salmon should not be successfully planted and propagated in the great rivers of New England, and become a valuable source of the public food supply, although there has long prevailed an idea that the pollution of such streams by manufacturing and city sewage made it impossible.

"I spent one day in Oregon City, on the Willamette River," he writes in the "Pacific Fisherman," "to see what the actual conditions were there, and found large pulp and paper mills and large wool mills emptying their acids, dyestuffs and refuse into the river at this point, and in spite of all its pollution over 250 tons of salmon were taken out of the river at this point during 1914. I believe that the water at this point has as much solution in it as has our Connecticut and Merrimac rivers. Large numbers of shad are taken on the streams below where much of this pollution comes from."

ACME TEA STORES SOLD.

The big chain of Acme Tea stores of Philadelphia, founded by the late Thomas P. Hunter has been sold to three of his faithful assistants, John Glenn, William Crowe, and Archibald McKinney, in accordance with a condition of his will, that his estate be withdrawn from the grocery business within two years of his death. The chain represents something like 250 large and small stores in Philadelphia and vicinity.

TIN and FIBRE CONTAINERS

FOR

Foods, Drugs, Oils

**Infinite Variety
Large Capacities
Prompt Deliveries**

American Can Company

Chicago New York San Francisco

WITH OFFICES IN ALL LARGE CITIES

RUMFORD

The Wholesome

Baking Powder

A scientific preparation being the result of extended research by the celebrated chemist Prof. E. N. Horsford, for many years Prof. of Chemistry in Harvard University.

Dietetically speaking, Rumford is without fault; as a leavening agent it is perfect; as a keeper it has no superior.

DOES NOT CONTAIN ALUM

Its Purity is Unsurpassed.

BUY PURE COMPRESSED YEAST

The discussion about using starch in Compressed Yeast has reached the point in the United States of a decision forcing those who used it to declare the fact on the wrapper or label.

That is how we administer the Food Laws in this country.

In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

We Do Not Use Starch in Yeast

A. P. CALLAHAN & COMPANY

2407 La Salle Street

Telephone Calumet 410

CHICAGO, ILLINOIS



Gleanings from the World of Foods



GROCERS who contemplate attending the National Wholesale Grocers' Convention in Boston the week of June 12 will, if they arrive Monday, June 12, have the privilege of witnessing the exercises connected with the dedication of the new Massachusetts Institute of Technology buildings consuming three days, June 12th, 13th and 14th. It is estimated 7,000 alumni will return for the festivities. The Charles River basin, on the border of which the new buildings to be dedicated are erected, will be crowded with all manner of sea craft, including torpedo boats of the United States Navy, steamers, yachts, motor boats, etc. The program is the most elaborate ever undertaken in Boston.

Since the old Technology buildings are in the vicinity of Copley Square and the Wholesale Grocers' Convention headquarters are in Copley Square, guests of the Copley-Plaza Hotel will be able to view the great procession and by a walk of ten minutes, see the water pageant on the "Charles."

The Wholesale Grocers open their convention June 14th so that by arriving early in the week, members can witness these exercises without interfering with their convention duties.

In view of these facts, members can appreciate the importance of making their hotel reservations at once.

* * *

Crude chicle gum amounting to 991,351 pounds, valued at \$495,676, was invoiced at the American consulate at Toronto, Canada, for the United States during 1915, compared with 610,585 pounds, valued at \$234,732, for 1914.

* * *

The Western Cannery Association has established a lecture bureau for the purpose of advertising the merits of canned goods. George Drake of Circleville, Ohio, who is secretary of the Western Cannery Association, is manager of the bureau.

* * *

Announcement was made in the wholesale grocery district recently that George H. B. Martin, J. Vernon Pimm and S. C. Seymour have incorporated under the trade name of the Philadelphia Vinegar Products Company for the purpose of manufacturing vinegars of all kinds. The company is capitalized at \$100,000.

* * *

Six vessels arrived in New York City on March 15, with fares of tilefish, the aggregate receipts being more than 131,000 pounds. The United States Bureau of Fisheries reports that twelve vessels have been engaged in this fishery during March and, in spite of the prevalence of bad weather, which has seriously interfered with the fishery, the receipts for the month have exceeded 147 tons.

* * *

Word has just been received from the secretary of the American Specialty Manufacturers' Association that at a meeting of the executive committee held on March 17th at the Association's offices in New York City, the city of Pittsburgh was chosen as the next convention city. Announcement of the dates will be made later as the committee came to no decision in this regard.

* * *

Representatives of the tea companies in the Province of Hunan, China, whose teas were awarded a Grand Prix at the San Francisco Exposition, are desirous of presenting samples of their products to the wholesale tea merchants of the United States "as a mark of appreciation of the honor conferred upon them." Mr. Allan S. Chow, secretary of the Republic of China's commission to the Panama-Pacific International Exposition, has conveyed this information to Secretary of Commerce Redfield and has asked for the names of the leading American tea merchants for transmission to the Hunan growers' representatives. Mr. Chow may be addressed at San Francisco.

Grape Juice Company in its attempt to protect the retailer and jobber by enforcing the maintenance of standard prices on its product, was disclosed recently when the damage suit brought by Frey Bros., wholesale grocers of Baltimore, alleging conspiracy in restraint of trade, resulted in a disagreement by the jury. The case must now be tried again unless Frey Bros. decide to withdraw the action after having failed to support their contention.

* * *

Harris Newmark, the pioneer wholesale grocer of Los Angeles and the founder of the M. A. Newmark & Co., grocery jobbers, died in that city recently at the ripe old age of eighty-two. He first engaged in the wholesale grocery business in Los Angeles in 1865 and celebrated the fiftieth anniversary of that event last June. Mr. Newmark was born in Prussia, coming to New York when he was nineteen years of age, and arriving in Los Angeles a short time later. He started the wholesale grocery house of H. Newmark & Co., in 1865, selling out to M. A. Newmark in 1886. Mr. Newmark had many fine traits that endeared him to his fellow-men. He was charitable, kind and a man who had always great consideration for others. Remarkably successful in business, he was enabled during the closing years of his life to do a great deal of good. In company with his two sons he had almost completed his autobiography, "Sixty Years in Southern California," now about to be published.

* * *

LOUISIANA HAS REDUCED CROP.

The Louisiana crop of cane sugar for 1915 was 136,500 short tons, or 273,000,000 pounds, according to the results of a canvass just completed by the Bureau of Crop Estimates of the United States Department of Agriculture. This production is much less than that of 1914, which was 242,700 tons, or 485,400,000 pounds. The 1913 crop was 292,698 tons, or 585,396,000 pounds. The cane crushed for sugar was 2,018,000 short tons in 1915 and 3,199,000 in 1914.

An unfavorable growing season contributed to this small crop of sugar. Cool, wet weather retarded the growth of the cane and, in some sections, the storm of September, 1915, did considerable damage.

* * *

COFFEE BOARD CHANGES NAME.

The board of managers of the New York Coffee Exchange has changed the name of the exchange from the Coffee Exchange of the City of New York to the New York Coffee and Sugar Exchange. The change is a result of the big market in sugar here since the war began.

When trading in sugar futures was inaugurated on the exchange on Dec. 15, 1914, there was considerable speculation among the members as to the plan's success. The foreign demand, however, due to the curtailment of Europe's supply of sugar, has created so active a market that the board feels that all doubt is past as to the continuation of the two commodities together on the exchange.

* * *

IMPORTS FEWER EUROPEAN SARDINES.

A review of the European sardine trade situation in Canada discloses these facts:

The present price quotations are from \$0.50 to \$1 higher than they were last year. Freight rates also have advanced considerably, and war insurance and the war tax increased the cost relatively more. It is estimated that all these charges have increased the cost of the European sardines by \$1 to \$1.50 a case, varying with the f. o. b. cost.

It is said that on the European coast the summer catch is just about at its height now and it is impossible to predict what the catch will be. The great difficulty at the present time is the irregularity of sailings. An effort was made by this office to place American sardines on the local market, but prices, including charges, did not for the present warrant their introduction.

In Millions of Homes
There's Only One Spread for Daily Bread

**JELKE
GOOD LUCK
MARGARINE**

is eaten with satisfaction at every meal. Always the same fine flavor—the same delicioustaste, the relish and enjoyment there is to a pure, wholesome appetizing food.



Order Your Package Today

Churned by

**JOHN F. JELKE CO.
CHICAGO**

SPIELMANN BROS. CO.

MANUFACTURERS OF

**CIDERS, VINEGARS &
COMPRESSED YEAST**

MAIN OFFICE

**Sheffield and North Aves.
CHICAGO, ILL.**

**Illinois Vinegar
Mfg. Company**

19th and Rockwell Streets
CHICAGO, ILL.

**MANUFACTURERS OF HIGH GRADE
DISTILLED VINEGAR**

Canned Salmon

ALL GRADES ALL SIZES

Largest Distributors
in the World

KELLEY-CLARKE CO.

NEW YORK CITY

SEATTLE, WASH.

"GOOD-BYE FLY"

According to Department of Agriculture Bulletin No. 118: Apply 0.62 pounds Borax to every 10 cubic feet of manure. Apply Borax particularly around edges; sprinkle with 2 or 3 gallons of water. This treatment should be repeated with each addition of fresh manure. Flies lay their eggs in fresh manure. Borax prevents their hatching.

Don't use more Borax than recommended above.

B. HELLER & CO.

THE PLANT BEHIND OUR PRODUCTS



CHICAGO, U.S.A.

LIMA BEAN GROWERS STRONG.

Reports from Ventura, Cal., claim that 73 per cent of the production of lima beans has been signed up for the new season. The total number of bags is 738,500 out of 1,022,000 bags.

The association is made up of eight smaller associations, one each in Camarillo, Oxnard, Hueneme, Santa Paula, Catcoy, Mound, Somis and El Rio. Directors were chosen in each of these districts. The central organization will have headquarters at Oxnard and is named the California Lima Bean Growers' Association. The officers will take steps for incorporation.

* * *

ANSWER PACKERS' PLAINT.

A bulletin by the National Cannery Association on the problem of better packing cases gives specifications for boxes made of various woods, indicating that with the proper quality of lumber furnished, all complaints against wooden boxes will be ended if the proper kinds of nails are used.

The bulletin gives the numbers and kinds of nails needed for soft, medium and hard woods, and also gives specifications for the sizes of the material used for ends, sides, tops and bottoms.

The specifications on material, estimated to increase the thickness of the material in from 15 to 20 per cent of the boxes, will not affect 60 per cent, and from 20 to 25 per cent of the boxes in use are above the required specifications. The one point on which emphasis is placed is on the nailing, and plenty of nails are advocated.

* * *

ESTABLISHES NEW RECORD.

A new record has been established by the United States Bureau of Fisheries up to March 1, 1916, in its fish-cultural operations of the present fiscal year. During this period, the actual distribution of fish of all species in the various fields of activity shows an increase of approximately 800,000,000 over the distributions during the same period in 1915. This would indicate that the output for the entire year will exceed the record output of 4,288,757,804 fish and eggs for the fiscal year 1915, and will probably reach 5,000,000,000 or more.

The most noticeable increases in output have been with the pollock, cod, flatfish, blueback salmon, humpback salmon, steelhead salmon, brook trout, rainbow trout, buffalo-fish, and crappie.

While favorable climatic conditions existing during the spawning seasons are to some extent responsible for these increases, credit is given to the energetic efforts put forth by the bureau's representatives in the field.

* * *

HAUGEN OLEO BILL REINTRODUCED.

Congressman Haugen, of Iowa, representing the dairy interests, last week reintroduced in the House at Washington his anti-oleomargarine bill of last session. This measure changes the name of all oleomargarine products to "margarin," makes a uniform revenue tax of 1 cent per pound on all product, subjects it to the laws of any state into which it may be transported, and prohibits the use of butter in its manufacture, or to make margarin containing more than 5 per cent of milk fat.

The new bill also attempts to establish a color standard, so that margarin shall not be made of any shade of yellow which might resemble butter in any way. The technical details of this standard are incorporated in the bill. It also limits the marketing of margarin to packages of one-half pound, one pound and five pounds, and in no other form. The bill has been referred to the House committee on agriculture.

* * *

MORRIS ELECTS NEW OFFICERS.

Reorganization of the official staff of Morris & Co., as a result of the accession of the Morris brothers to active control, was consummated recently at a special meeting of the board of directors of the company at the general offices in Chicago.

The following were formally elected officers of the company: Chairman of the board, Nelson Morris; president,

Edward Morris, Jr.; vice-president and treasurer, Charles M. MacFarlane; vice-president, Louis H. Heymann; secretary, Harry A. Timmins.

Nelson Morris becomes chairman of the board, while Edward Morris, Jr., succeeds to the presidency made vacant through the resignation of Thomas E. Wilson, who has assumed the presidency of Sulzberger & Sons Company. The board accepted with regret the resignation of Mr. Wilson and adopted resolutions of appreciation of his long years of service and best wishes for his success in his new office.

Mr. MacFarlane is made a vice-president in conjunction with being treasurer, to which office he was elected some years ago.

Mr. Heymann, who has been secretary, as well as head of the beef department, is made a vice-president, and Mr. Timmins becomes secretary.

The election formally places the affairs of Morris & Co. in charge of the two Morris brothers. They have announced that they will continue the same general policy laid down by their grandfather and followed by their father.

* * *

SMALL OUTPUT OF OLIVES.

The output of pickled olives in California from last year's crop was small compared with the size of the producing acreage in California. Weather conditions were not very satisfactory, and a much larger than usual proportion of small fruit resulted in the crop. This cut down the amount of pickling olives, which are the larger sizes.

In addition to this, and one of the main factors, was the situation existing with packers and handlers of ripe pickled olives. Practically all commercial operators in that line were well stocked up and some of them over-stocked from the year before. The high-priced stocks carried by packers precluded in many instances the possibility of financing a large handling for the recently passed winter, and made it, as well, unprofitable to put up further olives until the old pack is cleaned out.

Accordingly, while only a small pack of olives was made last winter, this does not mean that there is not ample on hand for all present outlet, as many packers have been carrying over-large quantities.

* * *

TO REORGANIZE SALES SYSTEM.

Reorganization of the system of the sales department of the California Associated Raisin Company, by which Fresno will be made the sales department headquarters and this department centralized, instead of continuing as now, with three district departments working independently, was decided upon by the board of directors of the company recently. Details have not yet been arranged, save that the New York and Chicago sales offices will be discontinued, and E. B. Merritt, now sales manager of the Chicago office, will come to Fresno as general sales manager for the company. H. E. Wood is sales manager now for the New York district, and W. A. Burrell for the Fresno department. What positions these two will have is not yet decided. The new system will be placed in operation about June 1.

Action has been taken by the directors, fixing a minimum wage scale of \$2.25 per day, effective April 1, among the men laborers employed in the plants of the association; the minimum heretofore having been \$1.75 per day, while the average wage paid was \$12 per day. More than 1,900 men will be affected by this order. The purpose of the order is to increase the standard of labor, and maintain a higher quality of the pack, according to the sentiment expressed by the directors.

* * *

WALNUT TONNAGE LARGE.

According to figures just compiled by George P. Weldon, Chief Deputy Horticultural Commissioner, the tonnage of walnuts shipped out of California during 1915 was 14,427 or a little over one-half the amount of nuts consumed in the United States. The figures show that the crop last year was the largest in the history of the industry, but that plantings may go on in California for some time without any fear of production exceeding consumption.

The figures were collected with the aid of county horticultural



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Full details of the new plans will be mailed to jobbers and retailers throughout the country. In the meantime the already increasing inflows of orders are being filled promptly from our New York warehouse.

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tural commissioners and are by counties, and have been verified by the California Walnut Growers' Exchange. Orange is the leading walnut producing county of the state, with 5,300 tons, while Los Angeles is second with 4,187 tons. Ventura is third with 2,750 tons and San Bernardino is fourth with 1,400 tons. Large plantings have been made in northern counties, but the trees have not yet come into bearing. Other counties show output as follows: Alameda, 50; Colusa, 100; Contra Costa, 90; Lake, 10; Riverside, 91; Siskiyou, 4; Sonoma, 30; Stanislaus, 5; Yuba, 100.

* * *

U. S. BIGGEST COFFEE DRINKER.

The American people, long known as the world's coffee drinkers, actually consume 40 per cent of the amount sold in the international markets, according to figures announced today by the Bureau of Foreign and Domestic Commerce. More than 1,000,000,000 pounds of coffee came to this country last year.

Germany normally is second in coffee drinking, but the war cut off German imports last year and made France second, with receipts less than one-fourth as large as America's purchases. The entire united kingdom consumes only one thirty-fifth the amount of coffee drunk in the United States.

The United States ranks third in tea drinking, with the United Kingdom first and Russia second. One-fourth of all the cocoa produced in the world finds its way to the United States.

Coffee imports show that the approximate per capita consumption in the United States is ten pounds, tea seven pounds and cocoa one and two-thirds pounds.

Three-fourths of the coffee consumed in the United States comes from Brazil and nearly all the remainder from Latin-America. Japanese tea is the American favorite, supplying nearly half the amount consumed. The Dominican republic leads all countries as a seller of cocoa to the United States.

* * *

TO ADDRESS SOUTHERN JOBBERS.

Many speakers of national prominence will come to Memphis May 24-26 to address the 800 jobbers and manufacturers who will attend the annual convention of the Southern Wholesale Grocers' Association.

J. H. McLaurin of Jacksonville, Fla., president of the association, has been actively engaged in preparing the programme for the convention, and has sent a tentative draft to J. R. Paine, chairman of the entertainment committee.

Among those who have accepted invitations to speak are Dr. Carl L. Alsberg of Washington, chemist of the Department of Agriculture; Dr. E. E. Pratt, chief of the bureau of foreign and domestic commerce, Department of Commerce; W. P. G. Harding of Washington, member of the Federal Reserve Board; Edward N. Hurley, vice chairman of the Federal Trade Commission; Fairfax Harrison, president of the Southern Railway; Ralph W. Moss, member of Congress from Indiana; Dr. H. E. Barnard of Indianapolis, food and drug commissioner of Indiana; O. B. McGlasson of Chicago, former president of the National Wholesale Grocers' Association, and J. H. Tregoe of New York, secretary of the National Association of Credit Men.

Mr. McLaurin has written Mr. Paine that it is his intention to have the association devote the first two days of the convention to the wholesale grocery business. The third and last day will be devoted to a national conference on bankruptcy.

The heads of every national association, bankers and others will be invited to take part in this conference with a view to working out ways and means to have better bankruptcy laws enacted by the federal government. This is a problem that is engaging the attention of many national bodies, notably the National Association of Credit Men.

The convention of the Southern Wholesale Grocers' Association will be one of the largest held in Memphis this year. It was brought to Memphis through the energy of the convention division of the Business Men's Club. Practically every wholesale grocery house in the south will be represented and the large grocer-manufacturing concerns of the nation will send representatives.

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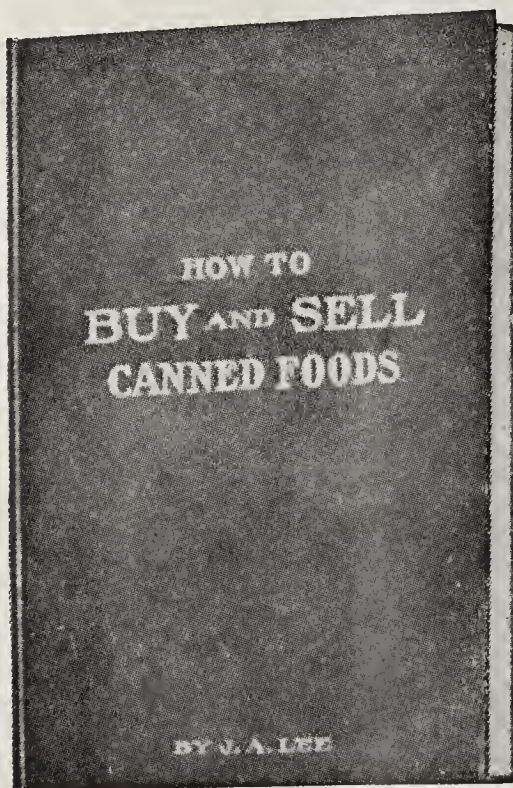
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THE AMERICAN FOOD JOURNAL

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In This Number.

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Dairymen Meet at Washington.
Calumet Indian in Utah.
Important Meat Products Decision.
Southern Wholesalers' Convention.
Consular Trade Notes.
Food Control News.
Collections by Mail.
Washington, D. C., Letter.
Gleanings from World of Foods.
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THE AMERICAN FOOD JOURNAL

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Vol. XI.

JUNE, 1916.

Number 6.

Behind Closed Doors

THE Dairy Division of the Bureau of Animal Industry, Department of Agriculture, was graced, on Thursday, May 4, with the presence of the shining lights of the national dairy industry. The influx came in response to a cordial invitation over the signature of A. D. Melvin, of the Bureau of Animal Industry, to come and bring their friends.

The hearing was held a la executive committee and a great show of secrecy was made. There was much unnecessary whispering, lip-reading and dummy talk.

Unnecessary, because nothing whatever of a properly secret nature took place in the course of the two sessions.

On the one side, an abortive attempt was made by the dairy interests represented to bring about measures

would have a tendency to relieve the nostrils and in time induce the indulgence of the many thousands whose defenseless babes have been inoculated with tubercular virus which is seething in rotten butter.

The butter boys fought desperately for their "rights," but Rawl stood pat and gave them plainly to understand that he had not as yet reached that stage of senility which would permit him to rule himself a liar or a durnfool.

The wonder is that, with the superabundance of gray matter sometimes attributed to good Brother Farrell and Company, these worthies never stumbled onto the fact that it would require an act of Congress to change or alter as much as a comma in the Report.

For that reason the hearing, as far as was concerned

"Then, too, these great creameries and butter factories send out this butter, beautifully but artificially colored and artistically wrapped, so that the people are deceived into the idea that they are buying a high class safe food. This fraud against the health and decency of the people is on a gigantic scale and there is no remedy except federal inspection." HARRY L. ESKEW, Food Commissioner of Tennessee.

which would kill any further activity on the part of those favoring the Linthicum resolution.

On the other, the butter boys were given distinctly to understand by B. H. Rawl, Chief of the Dairy Division, that all activity on their part, having for aim the withdrawal or modification in any sense of the notorious 1912 report must inevitably be doomed to failure. The Report will stand as it is, they were told.

The butter boys would do well to use their energies in some more hopeful field, say the bettering of bad butter conditions, so as to make possible a new report which would not come so near to registering butter 100% filth.

Such a report would act as an offset to the stench-laden document of 1912. The improvement made

the Report, bordered on the farcical.

Pasteurization came in for consideration and with touching sentiment on the part of the Butter Boys, was spoken of as a very excellent thing. But nothing tangible or definite was done, of course.

After a day of pleasing generalities and much dodging on the part of the butter boys, the hearing drew to a close with the final assurance of the Bureau that the 1912 Report would not be altered in the slightest degree to suit the purpose of the June tint crowd. The opinion was piously vouchsafed by some of those who attended the hearing that "much good" would come of it. Did they mean much good butter?

Of course not. Gum shoes and padlocks are not the usual companions of Sincerity.

PROF. McKAY AND BUTTER.

A FEW months ago we attempted to give what we considered a little advance information to our friends the dairy commissioners, and when we stop to reflect it is not surprising that this well intended information was not welcomed. Frequently the sinner dislikes to be told, particularly in public, of his sins. We have been accused of many things by officials who admitted themselves to be particularly interested in butter, but the latest comes from our old friend, Professor McKay. He has not mentioned the American Food Journal, but from reading his article, it is apparent that he had before him the editorial of this paper when writing his effort. He refers to the article as having been written by Alfred W. McCann. We do not have the honor of knowing McCann, and we have no business relations, directly or indirectly with him. It is known to us all that the sinner flees when no man pursues, but we respectfully deny, Professor, ever having been connected with Mr. McCann. We further deny any direct or indirect relationship with the Oleomargarine interests. We would as soon attack Oleomargarine as we attack butter if we saw the law was flagrantly disobeyed and winked at by those placed in power and authorized and sworn to defend the Public Health. We thank you, however, Professor, for admitting the truth of so many of our arguments. Your admissions are so full that it seems scarcely worth while taking up your article. In brief, however, we will.

You seem to have missed entirely the weight of our argument with reference to "watered butter." The statute clearly provides, though it has never been so seen by the Secretary of the Treasury or the Commissioner of Internal Revenue, that adulterated butter is any butter to which the manufacturer has purposely added water, and this, according to the dairy press, is done constantly by the "wise" creameryman. The broad-minded Commissioner of Internal Revenue named up to 16% as the "liberal limit." We say that "watered butter" is all butter that has had water purposely and fraudently added, whether it be under 16% when completed or not, and that such "watered butter" is adulterated butter under the law, and we say that the Commissioner of Internal Revenue or the officer having charge of the enforcement of the law will some day enforce it on these lines, and that all such butter, which we regret to say, today includes most of the commercial butter of the country, will pay a tax to the Federal Government of 10c per pound, and the manufacturer will pay a license as such manufacturer.

And, Professor, with reference to salt: The salt people have been advertising considerably this winter the relative merits of their salt over competitors, that if you use a particular brand of salt, you can sure get a bigger over-run. For instance, how about the man who found that he could incorporate 39 pounds of salt into 769 pounds of butter as against the other brand of salt where he could incorporate only 34 pounds into 825 pounds of butter, and wherein the moisture test showed 16% in the latter case and only 15.7% in the former case, or an increase in his over-run of 1.2%.

Again, Professor, we thank you for your statements with reference to artificial coloration, though we regret that you are unable to get away with your expression about coloring for the sake of uniform

color throughout the year. Turn to the different butter color ads of the dairy press and the truth is stated. Your good friend "Dandelion" has been kind enough to express this in different ways each week, and we need not quote them here, excepting a couple expressions. Here they are:

"Color makes the price. Butter sells on its looks
A deep golden color raises the price.

DANDELION BRAND BUTTER COLOR.

Dandelion Brand gives the green-grass color that all butter has in June."

Chicago Dairy Produce, Jan. 18, 1916.

"Think about your butter profits. Your butter profits—are they satisfactory? If they are not as high as you would like to have them, perhaps color has something to do with the case.

DANDELION BRAND BUTTER COLOR.

Dandelion Brand Butter Color gives that rich, deep, butter-cup color that makes the butter bring top price Use it for greater profits."

Chicago Dairy Produce, Feb. 15, 1916.

We also quote from our mutual friend, Professor Farrell:

"I notice that the color in this butter varied considerably. I believe the butter makers ought to decide on a standard for color and then they should all use that standard so that a uniform product could be put on the market."

This has reference to the annual butter contest in Minnesota and shows what a variety of color is on exhibition, and there is no uniformity. In fact, to quote Dr. Wiley in The Congressional Oleomargarine Hearing in January, 1901, Page 773:

"One argument which has been advanced in support of coloring butter is that it is made uniform. But the point is not a good one, because the people who color butter do not color it uniformly. We find the most remarkable variations in color. Some of it is almost red and, on the other hand, there (exhibiting a piece of silk) is a pale yellow, closely resembling the natural tint."

No, Professor, butter color is not used to give it a uniform color throughout the year. It is done for the sole purpose of getting a bigger price from the consumer. He will not buy a lard colored butter at the same price as he pays for a golden hue, and you know it. He thinks he is getting something worth the money, but as a matter of fact he is buying Annatto. Now there is plenty of law on the subject of making an article appear better than it really is.

We are glad, however, that you are willing to have the butter manufacturers label their artificially colored product, but your being willing to do so is conditioned on a trade with the Oleomargarine people. Now this has nothing to do with the case. If you will give the percentage of butterfat, and percentage of salt, casein and water, and show what the coloring matter is, then we believe the case is in point for you to ask the Oleomargarine people to do the same, but I do not believe you want to do that. At any rate, the Oleomargarine people are now doing this and so we think they will not be averse to your proposition, if you really make it as a bona fide one. For instance, the laws of Minnesota, Colorado, California and Ohio now require the ingredients to be marked on Oleomargarine packages.

We also are glad to note, Professor, that you are for pasteurization. Our regret is that more have not

stood by you in this campaign and that you have not had the entree to the legislative committee rooms. The earliest thought of the legislator with reference to pasturization was to protect the health of the dear little calves and pigs at home, but he did not go far enough to try to protect the lives of his fellow-countrymen. It has been a good while though since Iowa had a statute along these lines, that is, that skimmed milk before being returned from the creamery to the farmer must be pasteurized, but the good Legislature of Iowa allowed pasteurization to go at that. The Iowa creamerymen are to be congratulated, however, on their resolution recently passed in Convention, recommending pasteurization. It is to be hoped their sincerity will extend to their demanding this law from the Legislature, but, Professor, how can your Iowa creamerymen expect to compete with the creamerymen of Wisconsin unless Wisconsin has a like law? About the same time that the creamerymen of Iowa were voting for enforced pasteurization, the creamerymen of Wisconsin were voting against it.

You will come to it sooner or later. Federal regulation is the only practical solution of your problems. Buying cream on a graded basis will not work out and voluntary sanitation will be a dismal failure. As for buying cream on a graded basis, it never seemed to occur to any of the State Food Officials or any of you Creamery officials that this so-called No. 2 cream should not be bought at all. You are willing to buy it but you want to pay 3c per pound less for it than you do for No. 1. We want to state that this so-called No. 2 should not be bought in any instance. It is not fit for human food.

We notice that the Chicago Dairy Produce has picked a quarrel with Mr. Rawl, blaming him for the Linthicum resolution given in our last issue. However, the Chicago Dairy Produce does not deny the truth of Mr. Rawl's report, or to quote from their issue of March 4, 1913, they take issue with the same report, which they there call the "Melvin report," but do not deny the truth of it, but merely question the propriety of giving publicity to existing conditions. The Butter, Cheese and Egg Journal of March 15, 1916, however, takes a different view and seems to embrace the Linthicum resolution with pleasure, and the following is quoted:

"The action of Congress may only be a forerunner of what may be expected in the future, and it is fair to assume that some light will be thrown upon the subject which will substantiate what has been known to creamerymen for several years and of which the Butter, Cheese & Egg Journal has written many times. Does anyone believe if there was a Federal inspection law the same as the meat inspection law, that the sour, stale, rotten cream which is now being made into butter and which is sold as pure creamery butter would be tolerated? There would be the greatest house cleaning that has ever taken place in the dairy industry and that is no doubt why some are opposed to Government inspection of creameries. It is not hard to guess where those who are opposed to Government regulation of creameries stand.

"There is one thing certain, the state laws have had little effect in eliminating bad cream. All the inspection work has not stopped the downward movement of the quality of butter. We do not wish to be understood as saying that the inspection work is not good or that most of the inspectors are not efficient, but

we wish to say most emphatically that the state laws have not shown that they are the proper instrumentalities to get what is wanted, a better grade of butter, and facing these facts we challenge anyone to show where state laws, regardless of the number of inspectors, have or can in any state take the deplorable condition of the creamery business as it exists today and bring the quality of butter up to a standard where it was, say fifteen or twenty years ago.

"If the meat inspection law would have been delegated to the different states, where would that industry be today? It is true that even under Government regulations there perhaps will be mistakes made as there has been in the past, and we only need to point to the action of the Interstate Commission in granting an exceedingly low rate on cream, which in our estimation has had more to do in lowering down the quality of American butter than perhaps all other things combined as it has had a tendency to create a monopoly and tear down the local creameries which have had so much to do with the building up of the dairy business of the central west and build up the country, but as a whole the I. C. C. has been of great benefit to the country and that body of men may some day see the effects their action has had on one of the most important agricultural industries of the United States, and then a change may be expected.

"The Butter, Cheese and Egg Journal favors Government inspection of creameries and a Federal law which will eliminate rotten cream."

It looks as if our friends are not going to take kindly to this medicine. It is even so today as ever. Reforms are not made from within, but compulsory pasteurization, compulsory inspection of herds, compulsory inspection of creameries and of the milk supply of our cities is the order of the day, and regardless of the immunity held by these people in the past, these are bound to come, and an aroused and angry public knows no boss.

BETTER WAGES, BETTER HEALTH.

A short time ago, when Surgeon General W. C. Gorgas was in Chicago, one of the newspapers asked him to give what he regarded as the most important "health sermon" he could think of to leave with the people of the city.

Dr. Gorgas' health sermon was as follows:

"I believe that all health officers should turn their attention to those measures which would tend to increase the wages of the poorest class of laborers. I favor that, as one of the basic cures of existing health evils, because it will have the effect of producing more thoroughly good sanitation than any more direct measures they adopt.

"How can the laborer earning \$500 a year learn the benefits of good sanitation? He and his family must sleep in one little squalid room; the wife must cook and wash and the family must eat in the other room.

"It doesn't matter how much you would teach the process of sanitation, nor how much learning they receive on the subject of preserving health and preventing disease, it wouldn't do any good, because he hasn't the facilities to carry them out. But give him a better wage so that he can add another room and remove the congestion and the breathing of the whole family in one sleeping room, and then you go to the very foundation of the health problem."

Convention of Milk and Butter Producers at Washington—Group Conferences in Evidence—All “in Favor” of Better Butter—Nothing Specific Done to Attain It—Views of Ralph H. Case, Linthicum Resolution Attorney

A CONVENTION of the Milk Producers and other dairy interests of the United States was held at Washington, D. C., May 5 and 6. A fair representation was present when the gavel fell, but the spoken part of the entire meeting was confined to perfunctory whereases and edifying panegyrics on the desirability of co-operation and good butter. With the exception of President M. D. Munn, of the National Dairy Council, and of the officials from the Department of Agriculture, the speakers before the convention seemed to be laboring to avoid hurting somebody's feelings. It was like a milk-and-water revival of ping-pong.

President Munn, however, proved a refreshing exception in his remarks and split no hairs when he told the convening members that if he could help it there would be none of the customary wrangling and mud-slinging in the course of the proceedings. They were there for progressive team work and nothing but such would be countenanced by him. J. J. Farrell, a Minnesota Butter Boy, was the only one to disregard the injunction of the presiding officer. During the reading of something he wanted to say on the subject of dairy inspection, he waxed peppery, but the great majority of the conventioners were either holding group conferences in alcoves and ante-rooms, or chatting unconstrainedly under the speaker's nose. It was quite evident they had not journeyed all the way to Washington to sit and listen to any one man at a time. There is no exaggeration in the statement that frequently throughout the convention it was impossible to follow the speakers because of the loud talk of the members among themselves. The following program was followed:

FRIDAY, MAY 5, 1916.

Morning Session.

10:30 a. m.—Address of Temporary Chairman, Wm. T. Creasy, Secretary of the National Dairy Union. Appointment of Credentials Committee.

10:45 a. m.—Address of Welcome, Hon. Carl Vrooman, Assistant Secretary of Agriculture.

11:15 a. m.—Response to Address of Welcome, Hon. M. D. Munn, President, National Dairy Council.

11:40 a. m.—Report of Credentials Committee. Adjournment for luncheon.

Afternoon Session.

1:30 p. m.—Address, Hon. N. P. Hull, President, National Dairy Union.

1:50 p. m.—Permanent organization and appointment of committees.

2:10 p. m.—Address, “The Standardization of Conditions Under Which Milk and Cream Are Handled from Producer to Consumer, Particularly Affecting Interstate Shipments,” Dr. H. A. Harding, Dairy Bacteriologist, University of Illinois.

3:00 p. m.—Address, “Pasteurization in the Dairy Industry,” Prof. O. F. Hunziker, Chief of Dairying, Dairy Husbandry, Purdue University, Lafayette, Ind.

3:45 p. m.—Address, “Under What Kind of Legislation Can the Dairy Farmer Succeed?” W. J. Kittle, Secretary, Northern Illinois Milk Producers' Association.

Evening Session.

8:00 p. m.—Address, “Legal Standards for Butter,” Prof.

G. L. McKay, Secretary, American Association of Creamery Butter Manufacturers.

8:30 p. m.—Address, “Utilization of Surplus Dairy Products,” B. H. Rawl, chief of the Dairy Division, Federal Department of Agriculture.

9:15 p. m.—Address, “What Are Reasonable Regulations for a Milk Producer to Operate Under?” Lewis J. Taber, Dairyman, Master Ohio State Grange and representing the National Grange.

SATURDAY, MAY 6, 1916.

Morning Session.

9:30 a. m.—To receive reports of committees.

10:00 a. m.—Address, “Constructive Dairy Inspection,” Hon. J. J. Farrell, Dairy and Food Commissioner of Minnesota and President National Creamery Butter Makers' Association.

10:45 a. m.—Illustrated address, “Better Prices for Better Milk,” Dr. Chas. E. North, Secretary, Commission of Milk Standards, New York Milk Committee.

Afternoon Session.

1:30 p. m.—Business session; action on reports of committees.

The address of William T. Creasy, Secretary of the National Dairy Union and Temporary Chairman of the Convention, forms the keynote of the meeting and for that reason is printed here in full.

ADDRESS OF WM. T. CREASY.

Gentlemen: The purpose of this meeting is to outline a constructive program for developing practical uniform regulations governing the production and care of dairy products.

It is my duty as temporary chairman of this convention to explain how the issue of the call for this meeting came about. Representatives of the dairy interests, members of the Grange, and officials of the Department of Agriculture met to discuss a bill before Congress covering the matter of interstate shipments of milk and cream. The bill was found to be far-reaching in its effects, and it was the opinion of those at the conference that the bill could be made a basis for national, state, and city regulation that would result in bringing about uniform regulations regarding the production of milk and other dairy products from the cow to the consumer. Added to this was the multitude of regulations differing so much that the producer, on the one hand, was very much dissatisfied, believing that since they differed so widely they could not all be correct, and at the same time receiving little or no pay for additional regulations that were as often changed as new officers or inspectors assumed authority in city governments. The consumer, on the other hand, was complaining that he was paying a high price for necessary articles of diet, which were being criticised as to their purity and wholesomeness, and also meeting antagonism and unwarranted attacks by other industries upon this industry, which brings to the producers of dairy products of this country a billion dollars a year. To this was added the unremunerativeness of the business, together with the questions of legislation in Congress, as well as in the different states, relating to the important changes that are being agitated by those favoring the industry and by those antagonistic to it. Taking these matters, with many others not mentioned, into consideration, it was thought

by those parties in close touch with affairs that the dairy interests of this country should be brought together in convention in this city to discuss questions relating to the future development of this great industry. I say this great industry, because on nearly 81% of the farms of this country, according to the census of 1910, there were about 22,000,000 dairy cows. In other words, on nearly $5\frac{1}{4}$ million farms in this nation dairying is carried on to a greater or less extent. The same census report shows that the value of the dairy products, not including the milk and cream consumed on the farm, amounted to seven hundred millions of dollars, which, if included with the increase up to the present time, it would be safe to say that the business means to the agriculture of this country over a billion dollars.

This is only part of the story. It is universally conceded that to increase fertility some form of animal industry must be practiced. One of these branches is dairying. It is perhaps the best business educator, because the farmer soon learns whether he is doing business at a profit or loss. It gives employment the year round and has a wide adaptation of country. It furnishes the most healthful and most nutritious and the cheapest food products known. It has changed great sections of this country from non-profitable farming into a prosperous agriculture.

intend to do so. But conventions are only meetings to determine policy, and in the past have been, and in the future will continue to be, powerless to help much unless, as the result of this meeting, the dairy interests evolve a constructive and permanent program and unite in a federated plan for its fulfillment. This leads me to express myself in favor of a plan for a permanent headquarters in Washington, not only for the dairy interests, but for all agricultural organizations. Such a federation, supervised and directed by Broad-gauged, sincere men, will do more for the solving of these national agricultural issues than can be done by the present long-range method.

This would be welcomed by law-makers. It would present the farmers' views and wishes in a way that could not be mistaken. Not only would it mean a great deal to the dairy interests, but it would settle other great questions affecting agriculture, such as transportation and marketing of farm products, standardization of prices, the maintenance of a proper equilibrium in the production and distribution of farm products, and other questions vitally affecting the farmers' interests. Such an organization, with the information and help obtainable from our Department of Agriculture, would put the business of farming on a basis such as has never been heretofore known in this country.

“ARNOTTO (probably the native name), or ANNATTO (also called ARNATTO and ANNOTTA; Ger., Orleans; French, rocou). A coloring matter of vegetable origin used to some extent in dyeing and calico-printing; it is also used as a coloring ingredient in plasters, ointments, and in certain varnishes; farmers use it for coloring butter and cheese. It is made from the seed pellicle of an evergreen p'ant, the Bixa Orellana, growing in Brazil, Cayenne, and several other places. To obtain it, the seeds of the fruit capsules are crushed and allowed to ferment in water; they are next rubbed upon a sieve, completely mashed, and the coloring matter washed away; after some time the water is decanted, and the coloring matter allowed to dry in the shade. It is then broken up into cakes and wrapped in leaves. Urine is sometimes used to keep it from decomposing. Arnotto is insoluble in water; it dissolves with a red color in alcohol, in alkalies, and in fixed oils. It gives beautiful but fugitive shades; its employment in dyeing and calico-printing is therefore limited. Indians prepare from it a paint for the body, used partly for the purpose of protecting themselves against mosquito bites; in South America it is largely used to improve the color and flavor of chocolate. The chief coloring principle of arnotto is a crystalline yellow substance called bixin.”
NEW INTERNATIONAL ENCYCLOPAEDIA.

In one of the great dairy states, in the past ten years, the acreage of wheat has decreased 25%, the acreage of corn has increased 73%, and the live stock has increased 20%. As I have said, it furnishes work the year round for every one on the farm, no vacations, and never out of a job.

That all this work is done very cheap can be no better explained than by one who is at the head of the dairy business in one of the great dairy states of the Union, who writes: “The dairyman appreciates that he should receive an income that will pay him a manager's salary as well as the necessary amount to pay running expenses. If it were not, however, for the sale of surplus stock, I fear that the dairy products alone would not enable the farmer to consider his business of dairying a profitable one.”

The president of a large corporation, who also farms near a large city, called at our office a few days ago and said he was selling milk at eight cents a quart; that it didn't pay him, and that he would like me to tell him how it paid the farmer that was selling it for three cents a quart.

The question raised by this practical, hard-headed, successful business man goes to the very heart of the problem, at the root of all the farmer's problems. The question of how to make farming of any kind pay, speaking generally, is still unanswered. For the farmer it is the riddle of the sphinx, which not to answer is to be destroyed.

The reason we have never had an answer is that the farmer, the dairyman included, has depended on the other fellow to look after his business for him instead of looking after it himself. You know the story of the lion and the lamb lying down together—how happy, and *well fed*, and contented the lion was in the morning? That is the story of the farmer, with the farmer playing the part of the lamb.

The remedy is for the farmer to look after his own business, and this conference is evidence that the dairy interests

Farmers must federate in this way if they would have control of their own industries. The signs are multiplying that if they don't others will do it for them, with the result that the farmer will be the lamb in another lion-and-lamb story.

The high cost of living has hit the farmer and his “brindle cow” quite as much as his city cousin, by increased cost of feed bills, higher wages, increased freight rates, etc. The gentleman that could not make milk pay at eight cents a quart is living in a city where wages have reached the highest level with short hours, and it is getting to be a serious question with dairymen in many sections whether to continue or quit.

Patent cream, that has its good qualities in the purity of the water and the homogenized fats it contains, is sold to-day in some cities for the genuine article and not for what it is. Further frauds are being perpetrated upon the public by imitating other dairy products at the expense of both the producer and the consumer.

Is it any wonder that dairymen have become dissatisfied with the business?

This question, it seems to me, should receive the most earnest and careful consideration, as it will have much to do with the future of the business and may avoid a shortage of milk and its products.

There may be well-reasoned-out theories in regard to the amount of butter-fat and moisture in dairy products, yet the laws of this country must meet laws of other countries, so that the producers of dairy products are not at a disadvantage in the markets of the world. The dairymen are alive to these problems of providing good, safe, clean dairy products for the consumer, but at the same time they must keep the cost of these products within bounds, and if there is a lot of fuss and folderol in the business that is unnecessary we should know it.

We should be strict on the essentials necessary to produce wholesome dairy products, but we should not be hampered by

Thousands of years ago—the Deuteronomy: “Ye shall not eat of anything that dieth of itself; Thou shalt give it unto the stranger that is in thy gates: or thou mayest sell it unto an alien; for thou art an holy people unto the Lord thy God.” DEUTERONOMY, CHAPTER 14, VERSE 21.

foolishness and rules and regulations that are made by those who know little or nothing of the practical side of the great industry which is at the foundation of a prosperous agriculture

We have on this program experts who will deal with the leading questions that are now affecting the dairy interests, and we hope that we will have the support not only of the consumers of dairy products, but of those who are the disseminators of public opinion. We hope to show our appreciation of those who assist us in building up and our condemnation of those who maliciously tear down.

We believe this convention should work out and fix a standard of sanitary requirements for creameries and cream-buying stations, the absolute essentials in one class and the non-essentials to desirable requisites in the second class. We believe also that standardization of sanitary requirements of dairy farms should be outlined in the same way. We believe, further, that a joint effort should be made by the national and state governments on a basis of reimbursement of those whose cattle are slaughtered for disease, and that this convention should express its opinion on the question of pasteurization.

Whether we shall have an expensive Federal inspection of creameries, which would reach only interstate shipments, or whether an adequate state inspection shall be supported, or whether it would be wiser to have a modification of both by having the National Department of Agriculture, together with

hensive fashion possible, independently and in co-operation with the State experiment stations, to this disease with a view toward controlling it and lessening its ravages. We request that the best qualified investigators be assigned to this exclusive task. In view of the tremendous economic importance of this problem, we request that it be approached at once from every possible hopeful angle.

WHEREAS, the presence of tuberculosis in cattle is a menace to the profit of the breeder and the dairy farmer; and

WHEREAS, its presence in the herd can, as a rule, be detected by the application of the tuberculin test by men skilled in its use and when administered under proper conditions;

Resolved, That this convention urges breeders and handlers of all classes of dairy cattle to weed out reactors from their herds as a matter of protection to their own financial interests, either consigning them to the butcher or segregating them in the herd, when they are of sufficient value to warrant such manner of handling;

Resolved, That this convention heartily endorses the State-accredited herd plan of inducing breeders voluntarily to offer their herds for official test and secure a certificate which will accredit their cattle to any state without retest;

Resolved, That reasonable compensation should be allowed by Federal and State authorities for all animals slaughtered in the eradication of tuberculosis. This compensation should not be arbitrarily limited by statute, but should be fixed by

Anno Domini 1916—

Butter Boys' Resolutions: Whereas, the presence of tuberculosis in cattle is a menace to the profit of the breeder and the dairy farmer. . . . Resolved, That this convention urges breeders and handlers of all classes of dairy cattle to weed out reactors from their herds as a matter of protection to their own financial interests, either consigning them to the butcher or segregating them in the herd, when they are of sufficient value. . . .

a board of practical experts on dairying approve the work of the respective states, if satisfactory, is a question that should be determined by this convention.

Carl Vrooman, Assistant Secretary of Agriculture, spoke somewhat briefly, but to the point. He told his hearers in no uncertain terms that so long as they showed the proper spirit they might count on the support of the Department of Agriculture but only so long. They need not expect condonement for deeds which might not stand the test of daylight.

B. H. Rawl, chief of the Dairy Division, spoke interestingly on the “Utilization of Surplus Dairy Products.”

The other addresses were of a distinctly perfunctory nature and are not reproduced here for the reason that they are all much of the same color and of a technical nature.

The most brazen declaration of unscrupulous principles ever made before a public gathering of men concerned with the business of supplying food to the masses, was the reading of the resolutions adopted by the convention. Here they are in toto:

RESOLUTIONS ADOPTED BY CONVENTION.

WHEREAS, contagious abortion among the dairy herds of this country is a very serious menace to the profitable production of milk, exceeding in its economic destructive character any of the other diseases to which dairy cattle are subject,

Resolved, That the Department of Agriculture is hereby urged to give attention in the most persistent and compre-

appraisal in each case, or by court decision on proof of the value of the slaughtered animals.

WHEREAS, in the Year Book of the Department of Agriculture for 1912 appeared a report on the dairy and creamery industry of the United States, based on an inspection of only 144 creameries and dairies among the thousands in this country; and

WHEREAS, unwarranted and untrue inferences have been drawn from such report by the consumers of American butter, and the information therein presented has been unfairly used by interests hostile to the dairy industry to damage it immeasurably;

Resolved, That the facts are thus made matter of record and that report declared woefully incomplete in its survey and wholly false in its conclusions;

Resolved, That its publication was all the more reprehensible because of many years constant progress has been made in pasteurization and in general improvement in handling cream and in the manufacture of creamery butter, until today much the larger per cent of American creamery butter is made from pasteurized cream;

Resolved, That we approve and recommend general pasteurization of all creamery butter.

WHEREAS, the act of Congress of May 29, 1884, created the Bureau of Animal Industry specifically “to prevent the exportation of diseased cattle and to provide means for the suppres-

Says Dairy Commissioner Barney of Iowa: “As to the possibility of milk bearing disease-producing bacteria, it is our opinion, based on many years of inspection experience, that the only way in which the city consumer may be protected is by efficient pasteurization.” Commissioner Barney is himself one of the leading dairymen of the country.

sion and extirpation of pleuropneumonia and other contagious diseases among domestic animals;" and

WHEREAS, by executive act the activities of this bureau have gradually been broadened to include various lines concerned with the breeding and feeding of live stock and the manufacture and distribution of dairy products; therefore

Resolved, That the Conference of Dairy Interests held in Washington May 5-6, 1916, earnestly urges the Secretary of Agriculture to partition the present work of the Bureau of Animal Industry among three separate bureaus or offices, one concerned specifically and exclusively with animal diseases and to be called the bureau or office of Animal Health; one concerned with the encouragement of the breeds of live stock and the improvement of the utility stock on the farm other than dairy cattle, and one concerned specifically with dairy cattle and the dairy industry.

Resolved, That the Secretary of Agriculture be urged to form the heads of these three bureaus or offices into a Federal Live Stock Board, which shall administer all live-stock regulations, under direction of the Secretary of Agriculture.

Resolved, That the Secretary of Agriculture be also urged to request from Congress another Assistant Secretary of Agriculture, to whom the heads of these three bureaus or offices shall be responsible.

tries be urged to consider a closer union in co-operative legislative effort.

WHEREAS, the subject of denatured alcohol has always been considered as referring to the conservation of waste products; and

WHEREAS, we believe that it is a feeding proposition enabling the dairy farms to extract the fuel needed for consumption in the machinery and lighting of the farm and at the same time to furnish from his own fields a more nearly balanced ration; and

WHEREAS, the necessary experimentation for determining the cost of production and the kind of process and machinery suitable to this development will require expensive research;

Therefore resolved, That this Conference of Dairy Interests calls the attention of Congress to this great field of conservation and approve legislation that will make possible the necessary experimentation.

WHEREAS, the railroads of New England are now before the Interstate Commerce Commission asking for an increase in rates upon the transportation of milk and cream; and

WHEREAS, it has been shown by testimony under oath that

"J. J. Farrell, our State Dairy and Food Commissioner, was the first speaker and he strongly admonished the buttermakers to keep absolute control of *moisture put in butter* and stay safely within the mark required by law and to do this, a complete daily record of the moisture contents of every churning should be kept by the buttermaker. He said if a local creamery was caught with an accidental excess in butter they would be handled by the Revenue Collectors as a common moonshiner in oleo or whiskey and made to take out a license as manufacturer of adulterated food, pay a fine and a tax on their product besides. He favored a ten cent tax as sufficient to correct the carelessness of a creamery getting in an oversupply of water and condemned the tactics of the revenue department in exacting a license and heavy fine besides, which would come so near bankrupting the smaller creameries if hauled in under this ruling." From a Minnesota daily, May 27. This paper is friendly to Farrell. You don't suppose it lied about him, do you? Of course not.

WHEREAS, at the present time the regulations under which the milk supply of the country is produced are promulgated by the health boards of States and cities, and are subject to more or less change under different administrations of the health bureaus, thereby causing dissatisfaction between the producers and the health officers, and placing unnecessary burdens of expense upon the producers in changing buildings to conform to varying requirements;

Resolved, That we call upon the Secretary of Agriculture to appoint a committee consisting of two milk producers, one milk dealer, and two sanitarians, known to be identified with milk-production methods in advanced form, to frame a set of rules and regulations covering milk production, which shall embrace methods to be used in the care and handling of cattle, shall describe methods that insure cleanliness of cow and milker, shall set forth treatment of milk from udder to delivery, shall outline barn construction and cleanliness of barns, all with due regard to keeping cost at the level of the means of the average producer.

Resolved, That when a report from such committee shall have been approved by the Secretary of Agriculture, he is requested to use his good offices to have such report generally adopted by the States and cities of the United States.

WHEREAS, the use of foreign fats in the production of dairy products of all kinds constitutes a fraud upon the dairyman and the ultimate consumer as well,

Resolved, That it is the sense of this conference that all products so made should be so marked as to disclose the materials used in their manufacture.

WHEREAS, the outstanding benefit derived from co-operative effort of agricultural interests has been demonstrated by this conference;

Resolved, That the different branches of these allied indus-

any increase in transportation rates will be reflected in the price paid to producers for milk and cream; and

WHEREAS, it has been shown by equally credible testimony that the farmers are receiving less for milk and cream than it costs to produce it; and

WHEREAS, the dairy industry of New England has declined rapidly, as evidenced by the disappearance of many creameries, large numbers of cows; and in certain localities the abandonment of the dairy business; and

WHEREAS, an increase in transportation rates in New England may work as an opening wedge in effecting an increase of such rates throughout the country,

Resolved, That this Conference of Dairy Interests tender its sympathy to the farmers of New England in the fight against such increase in transportation rates and respectfully ask that the Interstate Commerce Commission give careful consideration to the rights and equities of the farmers, to the end that dairying may not be handicapped by transportation rates or systems impossible for the producer to bear.

What a revolting state of affairs has come to exist in this land of ours, when a handful of moral outlaws can band together and, with perfect impunity, publicly *resolve* to consign their consumptive cattle to the butcher, the rotten and diseased carcasses to be cut up and sold for profit to the people of the United States! What a self-indictment is this! What nauseating effrontery, to presume upon the ignorance and stupidity of a cheated nation to such an incredible extent as to *resolve*, viva voce, to feed tubercular germs by the billions to unsuspecting Americans! And yet some of these self same pariahs of the dairy industry would find it in them to snivel over the pitiful conditions of the Russian peasant, of the orphans of war-stricken Flanders, of the mutilated wretches of Armenia!

Vile, loathful, ignominious, utterly beyond the description of words is this latest chapter in the shameless annals of rotten

Commissioner Helme to Congressman Linthicum: It is not a fact that a large per cent of dairy cattle is affected with tuberculosis, but, on the contrary, a very small percentage is affected with that disease, and it is not a fact that infected dairy products "are among the most active agents in the spread of tuberculosis, typhoid fever and other diseases." The reason is that a large proportion of our creamery butter is made from pasteurized cream in which all such germs, if any there exist, are killed, and a large proportion of the milk consumed in our cities is likewise pasteurized.

butter. One stares at the printed words in the resolutions in mute astonishment and disbelief. But it is a fact. And it proves conclusively out of their own mouths to what perilous extremes these wolves of men have dared to go—and that under the very gaze of the Department of Agriculture. Readers of this paper will note with interest the views of Ralph H. Case, of Washington, D. C., who is serving as counsel for Congressman J. Charles Linthicum in the latter's fight for the Federal regulation of the dairy industry:

BY RALPH H. CASE.

The necessity for a complete investigation of dairy conditions and products was brought to Congressman Linthicum's attention by John H. Ferguson, President of the Maryland Federation of Labor. Mr. Ferguson had been instructed by that labor organization to take steps to protect the food supply of the general public.

Mr. Linthicum, aided by Mr. Ferguson and the writer, collected considerable data bearing on the subject. The Report of the Department of Agriculture for 1912, the 25th Report of the Bureau of Animal Industry, various public records, numerous articles and editorials in trade journals.

The data collected made a deep impression on Congressman Linthicum. He read statements by scientists showing that thousands of children are dying every year of bovine tuberculosis, that of creameries and cream-buying stations examined in six states 94½% were found to be unsanitary to a greater or less degree, that filthy, putrid, rotten cream is made into butter, that in many of the great centralizing plants horrible conditions exist; that simply millions of the dairy cows of the country are dying of tuberculosis, that dirty, disease-laden butter goes into interstate commerce unrestricted and uninspected; that the clean state has no protection from the dirty creamery in another state, that only through governmental investigation and supervision could this rotten condition be corrected,—then he introduced his resolution No. 137.

On April 1st Mr. Linthicum, in a short but fitting speech in the House of Representatives, gave a summary of the facts he had collected. He told the House that he did not have positive first-hand knowledge of the situation, but that the charge had been laid against the industry and the gravity of the charges made it vitally important that the full truth be known. He urged the necessity of a commission to make the proposed investigation.

On April 11th last a hearing was held on the resolution be-

fore the House Committee on Rules. Dr. A. D. Melvin, Chief of the Bureau of Animal Industry of the Department of Agriculture, said the report of the Department for 1912 represented a fair estimate of general conditions at that time. This is the report which states that 94½% of the creameries and cream-buying stations examined were unsanitary to a greater or less degree. He stated that it was his information and belief that a large percentage of the dairy products consumed by the American people are unfit for food and that the proposed investigation would be most helpful.

Dr. E. C. Schroeder, scientist of the same Bureau, stated that at least 9% of the dairy cows now being milked are affected with tuberculosis and capable of transmitting this disease to children. That means that not less than 2,000,000 cows are daily polluting the food supply of the nation. Dr. Schroeder further stated that on post mortem examinations it had been shown that as high as 6,000 children under five years of age die in every year of bovine tuberculosis, that butter is an ideal carrier of the tubercular bacilli, and, that as young children eat large quantities of butter, they are frequently inoculated with bovine tuberculosis, though many recover from the disease at the cost of untold torture and physical impairment.

Dr. John R. Mohler, scientist of the B. A. I., told the committee of his personal examinations of the bodies of young children dead of tuberculosis. Those examinations showed over 22% of the deaths were due to bovine tuberculosis. Dr. Mohler also stated that he found the bacilli of bovine tuberculosis lived six months in butter and 281 days in cheese. How much longer the bacilli might live is immaterial as practically all dairy products are consumed in less time. Not only were these bacilli alive but they were virulent and reproduced the disease in animals.

The conditions disclosed are almost beyond belief, but at present there is no remedy. Dr. Melvin said if infected butter was found it would be destroyed, but that the situation with regard to dairy products now is the same as existed in the meat industry prior to the passage of the meat inspection act of June 30, 1906. There is no way to check the infection at its source, no way to stop dirty disease-laden butter from going into interstate commerce. Prosecution of a few offenders has not availed to better conditions. Inspection of interstate shipments in preparation, compulsory sanitation—these are the only remedies.

Congressman Linthicum to Commissioner Helme: You state that "it is not a fact that a large per cent of dairy cattle is affected with tuberculosis." Dr. E. C. Schroeder, scientist of the Bureau of Animal Industry, said at the hearing on the 11th that one cow out of every ten in the United States has tuberculosis and is capable of transmitting the disease to human beings. Dr. Melvin said there are 22,000,000 dairy cows. Do you regard 2,000,000 tubercular cows as a "small per cent"? Dr. Schroeder also said that 6,000 children die annually of bovine tuberculosis. Do you regard that also as a "small per cent"? Do you wish to be on record as defending the reputations of these tubercular cows as against the lives of thousands of babies? You say you have examined milk from a large number of individual cows and in none was able to detect a germ of disease. I shall again give you the benefit of the doubt and assume that you are a competent bacteriologist. Your cows certainly should be a pride to your State. There are other cows which are a disgrace to any state. No denials and no amount of negative evidence can down the fact that these diseased cows transmit tuberculosis to children. Are you willing they should continue pouring a diseased stream into the life of a Nation? You ask how it is possible for a butter man to defraud the Government. The facts are that the revenue frauds are committed by men who hold themselves out to the public as butter dealers or makers and who secretly introduce oleomargarine into butter and sell the combination as butter. Dr. Melvin says all the oleomargarine factories are inspected by the Government, and that such frauds could not occur therein. It is immaterial to me whether the criminal is called an oleomargarine dealer or a butter dealer. If we had Federal inspection of butter going into interstate commerce, such frauds could not be practiced on the Government and the public.

The state food commissioner of Michigan in a recent bulletin says that while good butter is made in Michigan it is sent to New York and Philadelphia and only poor stuff is sold at home. He says that much butter now on sale in Michigan is creamery butter placed in cold storage in Chicago last summer and is now sold in Chicago at 27 cents and retailed in Michigan at 37 cents. He further asserts that cold storage butter six months old is not long for this world after being taken out and develops alarming odors and flavors. Question: Why, then, does Commissioner Helme disagree with the Linthicum Resolution, which aims to make such conditions impossible?

Mr. Linthicum introduced in evidence sixty-three exhibits consisting of Departmental reports, scientific articles, text books on milk and milk hygiene, editorials and articles from pure food, farm and dairy journals, and letters and resolutions from state and municipal boards of health in support of his resolution. The hearings and the exhibits are printed and form an interesting text on the subject.

Over four hundred endorsements have come to Mr. Linthicum from women's clubs, civic societies, labor unions, health departments, anti-tuberculosis leagues and other similar organizations. Since the hearing it has been charged on the floor of the House that the meat packers are interested in the passage of Mr. Linthicum's resolution, while at the hearing it was intimated that the oleomargarine interests are behind the resolution.

These charges constitute the old, old cry of the dairy men. They have covered their sins with the iniquities of others for many years. They are afflicted with "oleophobia," if we may coin the word. Whenever they are pounded for dirty and dis-

money, from two hundred thousand to half a million dollars, to be used in a nation-wide advertising campaign for the more extensive use of their products. Evidently the death and disease record of that industry is not sufficiently large to suit them.

They passed a resolution at their convention in Washington on May 5th which for cold blooded commercialism surpasses anything in written history.

They recite that tubercular cows are a source of "economic" loss to the dairy men and "recommend" their exclusion from the dairy herd. They know they are milking tubercular cows and they know their tuberculous milk and butter is killing the babies, they say they have killed the Linthicum resolution; so now, for purely financial reasons, they "recommend" that cows rotting with the white plague be segregated. Their dollars above the lives of children!

Safety first—for their pocketbooks. Millions for advertising, but not one cent for decency. The babies killed by tubercular cows are mostly city babies. They are the "aliens"

Congressman Linthicum to the editor of The American Food Journal in a recent interview: "I want to say that I have no acquaintance with a single one of the packers or oleomargarine manufacturers, or with any of their representatives. I am in this fight for decency in butter production, on behalf of the toilers in particular and the national consuming public in general. All innuendo to the contrary is false, inspired, and the cowardly slur of scandalmongers."

ease-laden products they cry "The oleo people are behind the movement. Save us from our enemies."

They know the conditions charged are substantially true. They are fighting Mr. Linthicum's resolution at every step. Their national head, Wm. T. Creasy, has written Hoards' Dairyman saying that the resolution is dead.

So are the 6,000 babies of last year, Mr. Creasy, and if they are successful and their lobby can defeat the Linthicum resolution, then the 6,000 babies of next year are already marked for death, tens of thousands are marked for lingering hours of torture, crooked backs and shrunken limbs.

On May 4th at the Department of Agriculture was held a secret meeting of the dairy men with the officials of that Department. Newspaper men were excluded, representatives of pure food organizations were politely shown the door. Mr. Linthicum sent his counsel, the writer, with a personal request to be admitted. Dr. Melvin frankly said, "If you insist on being present it will mean that there will be no meeting." He said he wanted to have a heart to heart talk with the dairy men about the famous report of 1912 which attacked them. He wanted them to tell just how rotten their business was and he knew they would not talk if outsiders were present. They had their meeting alone and in secret. These were the representatives of the great and powerful dairy industry. They would not talk in the open.

On May 5th and 6th these dairy men held a convention in Washington. They did not ask a further hearing on the Linthicum resolution. They either feared to further stir the putrid mess now beneath the public's nose, or they reposed confidence in the powerful dairy lobby to defeat the resolution. The dairy men have a plan on foot to raise a large amount of

to whom may be sold the thing which dies of itself. Dying, but still able to eat and to give milk, worse than dead are those 2,000,000 cows still, today, poisoning the food to be eaten tomorrow by babies, yet the dairy men "art an holy people." Will one life be saved by that sordid resolution? Then it were well passed. But what of the 5,999 who will die next year if nothing is done. Will any resolution save them? Not the dairymen's resolution. That is only meant to save dollars. The Linthicum resolution may save them if it is passed. A sane, energetic commission appointed and a prompt and thorough investigation made. The necessary legislation can be recommended when Congress convenes in December next and that, recommended, can be enacted into law. Statute law only can reach crimes of this character. Federal statute law alone can reach the interstate offender. Shall we then continue under the repulsive law of age-old usage? Shall we be "aliens" to these people, or shall they be made responsible to the strong arm of the U. S. A.?

In checking over the resolutions adopted by our friends in Washington, it occurs to us that their sincerity, or lack thereof, is clearly reflected in that the committee appointed to investigate is not authorized in one single word or way to investigate butter. They authorize the general inspection, investigation and improvements concerning milk, but nothing re butter. They talked a good deal with reference to the use of foreign fats in manufacturing butter, but this is of small moment. Practically none of the large creameries use foreign fats. They are able to prove their innocence in this respect. Therefore, they are willing to harp on improvements on this line. Of course they are. It will cut out what-

"Annatto, occasionally called arnotta and rocou, is composed of the pulp surrounding the fruit of Bixa orellana, growing in the East and West Indies and South America. The two chief kinds are Spanish annatto, imported from Brazil, and the flag or French annatto which comes from Cayenne. Brazil annatto occurs in cakes or rolls, is hard and dry, brownish on the exterior but red inside, and with a rather agreeable odor. Cayenne annatto is a soft paste, of a bright yellow color. It often has a repulsive urine-like odor, said to be due to the actual addition of urine to keep it moist and impart a rich color." ALLEN'S COMMERCIAL ORGANIC ANALYSIS.

ever little competition they have in this respect, and they would like to have an investigation made along those lines so as to show that they are "lily-white." Hence, their keen desire for reformation on this line. However, they have nothing to say with reference to change in the matter of moisture, butter fat standard, excess casein and salt. They want the label to show the ingredients where foreign fats are used, but no such suggestion where excess water, salt, casein and butter color are used. The convention was largely called together to consider Federal inspection. The resolutions giving authority to the committee contain nothing with reference to this subject, but diligently, purposely and deliberately omit it. They make no helpful suggestions for improvement by legislation, but in reality scramble wildly to prevent legislation being enacted. They resolve that they approve and recommend general pasteurization of all creamery butter. You will recall that at the Wisconsin Butter Convention last winter the resolution for enforced pasteurization was rejected.

Please note the friendly urging of the Federal Government

ties to get what is wanted, a better grade of butter, and facing these facts we challenge anyone to show where state laws, regardless of the number of inspectors, have or can in any state take the deplorable condition of the creamery business as it exists today and bring the quality of butter up to a standard where it was, say fifteen or twenty years ago.

If the meat inspection law would have been delegated to the different states, where would that industry be today? It is true that even under Government regulations there perhaps will be mistakes made as there has been in the past, and we only need to point to the action of the Interstate Commerce Commission in granting an exceedingly low rate on cream, which in our estimation has had more to do in lowering down the quality of American butter than perhaps all other things combined as it has had a tendency to create a monopoly and tear down the local creameries which have had so much to do with the building up of the dairy business of the central west and build up the country, but as a whole the I. C. C. has been of great benefit to the country and that body

Here is the law:

Page 5, Regulations No. 9, United States Internal Revenue. Section 1, Act of August 2, 1886.

"That for the purpose of this act the word 'butter' shall be understood to mean the food product usually known as butter, and which is made exclusively from milk or cream, or both, with or without common salt, and with or without additional coloring matter."

Sec. 2, Act of August 2, 1886:

"That for the purposes of this act certain manufactured substances, certain extracts, and certain mixtures and compounds, including such mixtures and compounds with butter, shall be known and designated as 'oleomargarine,' namely: All substances heretofore known as oleomargarine, oleo, oleomargarine=oil, butterine, lardine, suine and neutral; all mixtures and compounds of oleomargarine, oleo, oleomargarine=oil, butterine, lardine, suine, and neutral; all lard extracts and tallow extracts; and all mixtures and compounds of tallow, beef=fat, suet, lard, lard=oil, vegetable oil, annatto, and other coloring matter, intestinal fat, and offal fat made in imitation or semblance of butter, or when so made, calculated or intended to be sold as butter or for butter."

RENOVATED BUTTER (OR "PROCESS BUTTER")

Extracts from Act of May 9, 1902:

Sec. 4. "That for the purpose of this act 'butter' is hereby defined to mean an article of food as defined in 'an Act defining butter, also imposing a tax upon and regulating the manufacture, sale, importation, and exportation of oleomargarine,' approved August second, eighteen hundred and eighty-six; that 'adulterated butter' is hereby defined to mean a grade of butter produced by mixing, reworking, rechurning in milk or cream, refining, or in any way producing a uniform, purified, or improved product from different lots or parcels of melted, or unmelted butter or butter fat, in which any acid, alkali, chemical, or any substance whatever is introduced or used for the purpose or with the effect of deodorizing or removing therefrom rancidity, or any butter or butter fat with which there is mixed any substance foreign to butter as herein defined, with intent or effect of cheapening in cost the product or any butter in the manufacture or manipulation of which any process or material is used with intent or effect of causing the absorption of abnormal quantities of water, milk or cream; that 'process butter' or 'renovated butter' is hereby defined to mean butter which has been subjected to any process by which it is melted, clarified or refined and made to resemble genuine butter, always excepting 'adulterated butter' as defined by this Act."

The addition of small quantities of a foreign fat, lard, or oil to butter will render the product liable to tax as oleomargarine, and the producer thereof to special tax as manufacturer of oleomargarine.

that the States adequately look after the business within their borders. We quote the attached from the Butter, Cheese and Egg Journal of March 15th:

"In the matter of prohibition of neutralizer, the Butter, Cheese and Egg Journal urges the prohibition of its use. We would suggest that you come out on this point and favor permitting use of harmless neutralizers, provided they are sold under the proper label, and on the same basis with reference to harmless coloring matter. The New York Dairy Produce of May 10th has taken this position, and states that undoubtedly, eventually, where butter is made with the use of neutralizer, the label will have to disclose the presence."

There is one thing certain, the state laws have had little effect in eliminating bad cream. All the inspection work has not stopped the downward movement of the quality of butter. We do not wish to be understood as saying that the inspection work is not good or that most of the inspectors are not efficient, but we wish to say most emphatically that the state laws have not shown that they are the proper instrumentali-

ties of men may some day see the effects their action has had on one of the most important agricultural industries of the United States, and then a change may be expected.

The Butter, Cheese and Egg Journal favors Government inspection of creameries and a Federal law which will eliminate rotten cream.

In this connection it should be of interest to readers of this paper to note the trend of this important controversy in the South. A circular letter by Food and Drug Commissioner Harry L. Eskew, of Tennessee, under date of February 24, has elicited the following rejoinder from E. G. Bennett, Dairy Commissioner of Missouri:

Hon. Harry L. Eskew, Commissioner,

Department of Foods and Drugs,

Nashville, Tenn.

Dear Sir:

Your circular letter of February 24, 1916, addressed to the

commercial men of the country, has reached my desk through our council secretary.

I have been a member of the United States Commercial Travelers for several years, and during my life have had more than twenty years' experience as a commercial traveler; have been a breeder of Jersey cattle for several years; have operated a creamery; and for the past three years have been Dairy Commissioner of Missouri.

During all of these years I have been a careful observer of matters that pertain to the dairy industry and have never found conditions such as would warrant the misleading statement mentioned in your general letter.

You should know that the dairy industry (as a whole) is nearer the ideal standard today than ever before; you should know that this condition is largely due to the untiring efforts of dairy and farm journals, in constantly having before their vast army of readers (who include most of the producers of milk and cream) sundry articles, pointing out the correct methods and the importance of carefully handling dairy products, and the necessity of sanitary surroundings; you should know that every state in the union has dairy and food laws and regulations that (if enforced) is sure to protect the consumer from "disease and death," as you refer to.

The producers of dairy products know of these laws, and are or should be constantly reminded of them through such departments as yours and mine, which each state in the union (that makes any pretense to encourage and increase dairying within their borders) maintains at considerable expense, including lecturers and institute workers who are paid to impress on the minds of farmers and dairymen that the welfare and profit of their industry depends on producing and marketing desirable, safe and popular products from their dairies.

You should know that today there are more up-to-date dairy barns, equipped with more modern conveniences, and filled with more pure bred and high class tested cows than ever before, and while I do not claim that sanitation and cleanliness means extravagance and expenditure of large sums of money, I do mean that such establishments take great pains to meet the demands of the consumer, and they are indeed a splendid example, and also a source from which many pure bred animals are purchased for farm development. It has often been noted that the possession of a pure bred bull or cow has had a strong influence on the owner toward dairy betterment. Hence, these modern dairies should be encouraged and recognized by all Dairy and Food Departments.

You should know that Indiana, Illinois and Missouri are three of the states in the "great dairy districts of the Middle West" that refer to, and it may be of interest to know that ninety per cent of the butter made in these states is made from pasteurized cream, and that our highest authorities say, "Proper pasteurization eliminates all harmful bacteria from milk and cream." Not more than three per cent of the ten per cent made from unpasteurized cream is shipped into other states; practically all of the butter made in these states from unpasteurized cream is made in co-operative creameries that are owned and controlled by the cream producers. They realize that on the quality of their products depends their prices and success, and they market their cream sufficiently often that the butter-maker can and does make highly desirable finished products, and on account of the high class butter produced in most co-operative creameries, they usually set it at a premium over the highest market quotations.

You should know that the creamery man (more than anyone else) realizes the necessity of making a first class butter; he knows that butter, when sent to market, is tested and scored and that the price he gets for it depends on its quality; he knows that milk, cream and butter is very susceptible to contaminations of all kinds; that it is impossible to make a good finished product from poor raw material, and he is constantly striving to improve conditions among his producers of raw material, and has his factory equipped with the most modern and up-to-date machinery for the sanitary handling of the products during the course of manufacture, and until it reaches the storekeeper's hands.

State dairy laws provide that such rules and regulations as are necessary to carry out the provision of the law may be made by the dairy commissioner. We have such rules (a copy

enclosed) and they are generally observed. We emphasize that it is a violation of the food law to buy or offer for sale, food products that are unfit for human consumption—and, while there may be an occasional infraction of the law, they have never been so general as to prompt such condemnation as is contained in your letter.

Because an occasional cream station, dairy or creamery is found not up to the standard required by the law is no more reason why there should be a cry for federal inspection of dairy products than there is for such federal inspection of kitchens of hotels, restaurants, etc.

An occasional dirty kitchen provides no more reason for denouncing all hotels and restaurants, and giving no credit to those that are up-to-date, modern and sanitary than does the finding of an occasional dairy and creamery justify the denouncement and attacks being made on the dairy industry.

It is a notable fact that in all of the recent charges made against the dairy industry (and there have been several) all apparently emanating from the same source, not one that I have seen has called attention to the progress of dairying nor have they mentioned anything that would indicate any improvement had ever been made toward dairy betterment, but have summed up their conclusions as though all creameries, milk and cream stations, dairies, etc., are veritable breeders of disease and death and that federal inspected butter and the use of "U. S. inspected, wholesome, nutritious, oleo" is the consumer's only protection.

If you believe the health of the families of traveling men is in danger through using uninspected butter, and you felt it a part of your official duties to offer advice in the matter, would it not have been more in keeping with the dignity of your office to have advised getting in touch with local or distant dairies or farmers of unquestioned reputation and have butter shipped by parcels post, the same way you advise the purchase of oleo?

Why should you call the attention of traveling men to the "wholesome, nutritious, United States inspected, safe food, in place of butter?" I think some of your good Tennessee dairymen will enjoy reading such comments from you. Do you know there are eight or ten different formulas for making oleomargarine, and that Congress, in all its wisdom, has failed to provide a standard for it, and that much of the best brands and highest priced oleomargarine contains a large percentage of "uninspected creamery butter," and that mixing it with oleomargarine does not eliminate the "grave dangers of spreading disease," such as you mention.

You must know that federal laws are not infallible, that we have a law compelling the manufacturers of oleomargarine to pay ten cents tax on colored oleomargarine and that the Government has been defrauded out of more than \$27,000,000 by unscrupulous dealers, coloring it without paying the tax, and the federal authorities haven't been able to stop the fraud, and that if the tax were removed colored oleomargarine would be sold as and for butter and bring almost, if not quite as much, per pound as first class butter, through deception and misrepresentation?

What assurances have you that "federal inspected butter" would be more wholesome than butter made in creameries operating under state regulations?

You must know that if your inspectors find butter that, in their judgment, is unwholesome or produced under unsanitary conditions, it can easily be traced to the manufacturer, and a report obtained from the dairy or food department of the state in which such factory is located, as to the quality of its products and its methods of producing or manufacturing same!

You must know that Tennessee has gained considerable reputation for breeding high class dairy cattle, and that some of your leading citizens are engaged in the honorable work of breeding dairy cattle and dairying, and that such attacks as you and Dr. Jones make is most detrimental to the welfare and development of dairying, not only in your state, but wherever the influence of such unwarranted charges are felt.

You should know that dairying is our most important branch of agriculture; it not only produces nearly a billion of dollars annually for the farmers of this country, but there is no way so effective in increasing the productiveness of the soil, through building up its fertility than with the dairy cow. The

greatness of this industry, giving substantial aid to hundreds of thousands of farmers, surely entitles it to be paramount over the production of oleomargarine, which makes only a few manufacturers fabulously wealthy, and does not now (and never will) under the regulations proposed by the oleo interests, provide in its true sense a poor man's butter.

It seems to me you are taking a great responsibility upon yourself to make such broad, sweeping, unqualified inferences, that all butter is dangerous to health if uninspected by federal authorities. True, butter is, at certain seasons of the year, artificially colored, and should always be nicely wrapped. Farmers' wives everywhere, at times, use artificial coloring for their homemade butter. You surely know this color is a harmless vegetable compound and that it is not put in the butter to deceive, nor does it deceive anyone, as it is never sold for anything else than what it is, *BUTTER*, while a very large percentage of colored oleomargarine is sold for butter, something it is not, and there is your real fraud and deception.

If what Mr. McCann says is true, and Dr. Jones, while admitting he does not like his style, takes great pains to quote him at length and in minute detail, and if what Dr. Jones says, and that portion of the report of the United States Department of Agriculture quoted by him is truly true, and your statement that a "year's" delay means disease and death to thousands," is correct as to present day conditions, I think the food and dairy commissioners of every state in the Union would be doing their people the greatest service by recommending to their state legislators and to their representatives at Washington the abolishment of *all* food and dairy departments, for if these things are true today, we are surely retrograding, and our departments are not serving the purposes for which they were created.

I am for clean, wholesome, nutritious foods of all kinds. I believe every one is, unless it is the unscrupulous, who for financial gain practice deception and fraud. Unsanitary dairies and creameries should be forced to comply with state dairy and food laws. It is the duty of the Dairy and Food Commissioners to see that their laws are enforced, rather than advise the use of substitute products, especially when it follows such unfair, misleading and unsupported charges as are being made against the dairy interests, in this apparently well organized campaign to defend and further popularize such substitute products.

Very truly yours,

E. G. BENNETT,
Dairy Commissioner.

To which Commissioner Eskew replies in the following terms over his signature:

May 4, 1916.

Hon. E. G. Bennett, Commissioner,
Department of Dairying,
Columbia, Mo.

Dear Sir: Your rather lengthy and unsolicited letter of May 1st received.

Note that you have been a member of the United Commercial Travelers for several years, and particularly note that you have been a breeder of Jersey cattle for several years, and have also operated a creamery. I, therefore, arrive at the immediate conclusion from your letter that it was dictated as an inspiration prompted by your commercial interests in life instead of having to do with your official duties. Have no reason to doubt, whatever, that you have been a careful observer of matters that pertain to the dairy industry, and I have no reason to take issue with you in your statement that the dairy interests of today are much improved and in better condition than they have ever been.

Inasmuch as you have taken the liberty to insert in almost every paragraph of your letter, the words "You should know," I will in turn ask you if you realize that notwithstanding the fact that creameries and dairies of this country are in better condition, this fact does not do away with the indisputable evidence that the small producers of these products do not as a whole take the proper care of them. You should know that the small producers, taken as a whole, throughout the United States, constitute the producing of a very large percentage of our dairying products. You should

also know that such legislation as I recommend in my general letter would not in any manner destroy the present stage of efficiency that the modern dairyman has now accomplished, but would certainly improve the industry as a whole. I mean by this, helping the man who is already doing right, to improve, and insisting that the other fellow who is not paying any attention at all to these matters, must improve.

I thank you very much for your suggestion that "*You should know* that every state in the Union has dairy and food laws and regulation, that *if enforced* is sure to protect the consumer from 'disease and death' as you refer to." I wish you to distinctly understand that I do know these things, and that I am very proud of the fact. I furthermore believe that in requesting Congress to pass this legislation that it would give state officials Government co-operation, which we do not at this time have to the extent that we wish. You, as Dairy and Food Commissioner of Missouri, should be the last man to antagonize such legislation. You stand in your own light when you do it, as Dairy and Food Commissioner of Missouri, but it is quite possible that you help yourself personally as breeder of Jersey cattle, and as having operated a creamery.

I also know that there are thousands of pounds of butter shipped back and forth from one state to the other to renovating plants which when shipped is entirely unfit for food, and I doubt very seriously when same emerges from a renovating plant that it is free from all contamination. As stated above, there is no question in my mind but what the leaders in the manufacturing of dairy products have done a great deal to improve the standard of their products. By so doing they have popularized their products and made the public feel safer in purchasing. This is all right, and is certainly as it should be, and they deserve a great deal of credit for so doing, but I fail to see, as stated above, why this fact would be antagonistic to further regulations that would tend to greater improvement.

You further state that "You should know" that there are more up-to-date dairy barns equipped with modern conveniences and filled with pure bred and high-class tested cows than ever before. While I thank you for this information given voluntarily to me, I wish to inform you that I am thoroughly acquainted with this fact, and your further voluntary suggestion that these modern dairies should be encouraged and recognized by all Dairy and Food Commissioners is received in full accord. Therefore I can only reiterate my statements that if Dairy and Food Departments should recognize and encourage these modern dairies, they should go further, and obtain legislation that will force the one who is not a modern dairyman, to be one. Permit me to say that in this instance you seem to have overlooked this fact.

You further state that "*You should know* that Illinois, Missouri and Indiana are three of the states in the 'great dairy districts of the Middle West' that you refer to." Would respectfully point out that no reference was made to these states in my letter. However, I note that it is contained in an open letter sent Hoard's Dairyman and signed by Emmet A. Jones. I am indeed gratified to learn from you that 90 per cent of the butter made in these states is made from pasteurized cream, and that our highest authorities say that proper pasteurization eliminates all harmful bacteria from milk and cream. You furthermore state that not more than 3 per cent of the 10 per cent made is shipped into other states. What objections have you to having this 3 per cent properly controlled by the U. S. Government? I would be pleased to have you answer this question.

As stated above, a great deal of your letter is devoted to acquainting me with facts of which I am already aware, and that is, that the modern dairyman is attempting in every way to improve his products. I have thoroughly agreed with you as to this, but take issue with you when you even suggest that national legislation would not greatly improve the products that come from the small producer. When you have convinced me that the products as a whole in this country, whether or not they are produced by the dairyman in every sense of the word, or by the housewife, and careless negro of the South, are absolutely without fault and need

no Government inspection, then I will agree to discontinue my efforts as to the enactment of this proposed legislation in Congress.

I further wish to state that in my general letter there was no particular criticism made of the Dairy Commissioner of Missouri nor of the State of Missouri's dairy products. This was a general letter and was made and intended to apply to each and every state regardless of how well they enforced their state laws. We need the co-operation of the U. S. Government along this line, and I am perfectly candid with you when I say that if you, as Dairy Commissioner of Missouri, do not see fit to co-operate in this proposed legislation, you are derelict in your duty.

In reference to the fifth paragraph, page 3, of your letter, wish to say that I require no suggestions whatever from you as to the manner in which I uphold the dignity of this office. In reference to your suggestion as to how to keep within the dignity of my office, will say, have you kept within the dignity of your office in addressing this letter to me? It would seem that you are sending a great deal of advice and suggestions to me which were not solicited by me, and I am frank to say would not have any weight with anyone unless they were financially interested in the dairying business.

In reply to your question in sixth paragraph of your letter, on page 3, wish to say that I called the attention of this matter to the traveling men simply because they, as a class, are on the road the greater part of their lives and have no choice whatever as to the character of dairy products which they are compelled to consume. Unlike the housewife or head of family, they pay for something which they are not in a position to know anything about.

For your information, wish to say that I have taken this matter up with some of our "good Tennessee dairymen," and I find that they are heartily in accord with any improvements that can be made. They believe that to the man who is doing right and wants to do right, this legislation cannot hurt, but they believe that such legislation might hurt them were they doing a rascally business and wished to continue to do so.

I wish further to say that I am quite aware that Congress in all of its wisdom failed to provide a standard for oleomargarine, and that some of the best brands and highest priced oleomargarine contains a large percentage of uninspected creamery butter. It is because of this knowledge that I am heartily in favor of strict inspection by the U. S. authorities as to butter in interstate commerce. When this shall have been accomplished the use of uninspected creamery butter will cease automatically. I am really surprised that you had not given this point any attention. I recognize that the Federal laws are at all times not infallible, but I do recognize that through proper co-operation between the Federal and State authorities much more can be accomplished than if either of these branches of government work separately.

In reply to your second paragraph, page 4, wish to say that I have great confidence in the Federal authorities as to inspectional work, and I believe that if strict regulations covering dairy inspection were enacted it would be of great help to state inspectors. I am really at a loss to understand why you or anyone else, and especially you in your official capacity, would object to any help the U. S. authorities might be able to give us.

Relative to the fourth paragraph of your letter, page 4, wish to say that I am not only aware but proud of the fact that Tennessee has maintained considerable reputation for breeding high-class dairy cattle, and that some of our leading citizens are in the honorable work of breeding dairy cattle, and dairying. I furthermore believe that these men are so honorable that they would not attack any legislation that would not affect them provided they were right, but would affect the man who was wrong. The charges that I have made in my general letter are not unwarranted and are substantiated on facts, not based merely on the man who is conducting a dairy, but more especially as to the small producer in the outlying districts. In controlling this part of the business is where we need the legislation most.

You go at great length as to advising me as to the amount of money that is produced for the farmer from the dairying business in all of its branches, and also that there is no way to so effectively increase the productiveness of the soil, through building up its fertility, as with the dairy cow. While I appreciate the spirit of your letter in offering this information, wish to advise that I have been at all times thoroughly acquainted with this fact.

Wish to say that I am in no sense advocating or helping the cause of oleomargarine. Oleomargarine should have rigid inspection, but I stand firm in the belief that butter should be as rigidly inspected.

I wish to say to you emphatically, that whether or not I am taking a great responsibility in the statements I made, I am able to defend my position. I did not intend to convey the impression that should we not have Federal inspection this food would be dangerous to eat, but I do contend that Federal inspection certainly does lessen the chances, and I believe if you will give this matter thorough consideration and lay aside biased opinions which you may have on the subject, you will be forced to agree with me.

Permit me to say that your opinion as contained in third paragraph, page 5, as to abolishing of all food and dairy departments, is absurd, and surely you must have written this statement as a joke. The Food and Dairy Departments of all the states are doing a great work, but we do need the help of the Federal authorities. You know, as well as I do, that they could help us and we could help them.

You admit that you are for clean, wholesome, nutritious foods of all kinds, and that you further believe that every one is, unless it is the unscrupulous, who, for financial gain, practice deception and fraud. It is just exactly the latter gentleman that this proposed legislation would be enacted for. You further state that unsanitary dairies and creameries should be forced to comply with State dairy and food laws. I agree with you, and I believe that this is being generally done. But can you suggest a remedy by which every housewife's kitchen throughout each and every state in the Union can be inspected, and also in the South, can you suggest a system by which we can inspect every negro hut, from which may come from one to two pounds of butter per week? In the latter case, this product is gathered by traveling hucksters, loaded as some central point in amounts of as much as two or three cars at a time, and forwarded in interstate commerce, either to renovating plants or directly to the market in other states. In the shipping of this article we have no jurisdiction, and unless we were fortunate enough to be acquainted with the shipment and could notify other state departments, such a shipment in all probability would be consumed by the people of the state to which it was shipped. Federal inspection of this product before it could be loaded on the cars to be shipped out of the state, would, I think, cause a great deal of improvement.

Wish to say, further, that there has been no unfair, misleading and unsupported statements made against the dairy interests. I do not hesitate to agree with you that if you consider all dairy interests as applying to modern dairies in every sense of the word, then this legislation would perhaps not be necessary. It is the very small producer, taken as a whole, that makes the very large producer throughout the United States.

In conclusion, wish to say that while your letter was unsolicited, and full of information which was not necessary, I duly appreciate the same, and would be glad to hear from you at any time that you may have advice to offer.

Sincerely yours,

HARRY L. ESKEW,

Commission houses of Iowa have been notified by W. B. Barney, state dairy and food commissioner, that they will be required to mark the net weight on potatoes and similar products when sold. The order is the result of a complaint made by a retailer in an Iowa city that he had been purchasing potatoes from a commission agent, and had been swindled six pounds to the bushel on all purchases for a long period. Retailers are required to mark the net weight on all packages when requested by purchasers.

Southern Wholesale Grocers' Association Holds Annual Convention at Memphis, May 24-26—McLaurin Re-elected to Presidency — Many Speakers of Note—Galveston Chosen for 1917 Gathering

THE annual convention of the Southern Wholesale Grocers' Association was held under most favorable auspices at Memphis, Tenn., May 24, 25 and 26. An executive meeting of the organization occurred the evening of Tuesday, May 23. The convention was called to order by President J. H. McLaurin. An invocation was pronounced by Rev. T. W. Lewis of Memphis and the program of the convention was under way. Six hundred conventioners were present when the gavel fell.

Co-operation with manufacturers and retailers for a more economic distribution of food was the theme of the wholesale grocers in their first day's session. Greater service to the public was the keynote of the meeting.

The grocers were addressed by speakers of national prominence at the morning and afternoon session, and heard reports which showed that the southern association is enjoying the greatest prosperity in its history.

Dr. Carl L. Alsberg, chief chemist of the Department of Agriculture, told the grocers that the pure food and drug law is accomplishing its purpose, and that fewer and fewer violations are being reported to federal authorities.

Dr. H. E. Barnard, state food and drug commissioner of Indiana, condemned the muckrakers who tell the evil of the 1 per cent of unwholesome food and fail to give credit for the 99 per cent pure food. He congratulated the grocers on the part they are playing in bringing about better conditions, and urged them to join with the manufacturers in educating the public on food values through the daily newspapers.

Dr. Barnard said:

BY DR. H. E. BARNARD.

When an invitation comes to me to speak to a group of men whose industry and my official position are of intimate concern I gladly accept. I long since learned that constructive work is possible only when the interests concerned work together. It is quite unnecessary to tell you that the wholesale grocers of the country from the beginning of pure food effort have been enlisted in the ranks of the constructive workers for better food and more of it. But I do not propose, in the few moments I can speak before you, to discuss the hackneyed and historical subject of pure food legislation. It is well that we have such legislation and that the laws are working well both for the man who sells and the woman who buys for her family. The big thing that remains to be done by the food industries today is, as I see it, to wean away the public from the idea that food manufacturers are somehow less to be trusted than other business men; that they are still looking for chances to work off poor food on an unsuspecting and uneducated public; that the present-day food supply is cheapened and devitalized until it is the cause of all human ills; that the miller who makes patent flour, the rice merchant who sells any but brown rice, the broker in molasses who handles the modern syrups; the baker who makes loaves of white bread; the milkman who dispenses pasteurized milk and the warehouseman who chills and freezes perishable foods, and the canner who packs in tin, are all engaged in a gigantic effort to starve us and our children.

It is high time for food manufacturers, brokers, whole-

salers and retailers to get together and in a determined, well-thought-out way, tell the public whom they serve something about food which will be helpful instead of burdensome, and pleasant instead of distasteful. A flood of pure food publicity now infests the daily press and the popular magazine. Years ago, and I am glad to put it in that indefinite way, there may have been occasion for howling about food adulteration and food fraud, but if there ever was need for frightening the consumer and so compelling legislation, you know, as men who handle food, and I know, as an official, that it is not now necessary to frighten folk over their food supply. It is because I realize the necessity for constructive work that I am trying to do something from my office which will reassure the consumer so that he can sit down to dinner without wondering whether it is better for him to die of starvation or food poisoning.

The public must be taught to trust its food, not to fear it, and the writer on food subjects who gleefully weaves his tales about food adulteration at so much a thousand words, or who points his accusing finger at the scarlet letter on the breast of the convicted manufacturer, and the narrator of the dreadful stories of rotten eggs, embalmed beef, polluted oysters, plaster of paris bread and diseased milk, must be forced from his muckraking. I use the word "forced" advisedly. The food industry cannot go forward bearing the burdens of libelous publicity. Such publicity is as outrageous as it is false. The public hears only of the bad 1 per cent and never realizes that 99 per cent of the food supply is pure, wholesome, well made and well handled. That is the real story—that is the vital fact in all talk of food and nutrition. The public will get over its fear of the food supply and trust the manufacturer who is supplying it with nutritious, appetizing food at reasonable price, but it will only do so when the daily paper wakes up to the fact that fear of food does a hundred times more damage than bad food, and that a constructive rather than a destructive editorial policy should determine its discussion of all food problems. The press must understand that it is up to it to co-operate in the campaign you and I are making in behalf of a well-nourished public and that they fall far short of practical co-operation when they accept money for pure food advertising at the cashier's desk and send out in their editions nauseating, untruthful stories of food fraud and food poisoning.

The grocery trade supplies through the retailer the tables of twenty-five million American families. It supplies them well, and as I know it, it supplies them at reasonable cost. Before the food manufacturer or wholesaler ships a pound of his product he may profitably ponder long over the fact that he is selling the least discriminating, least skilled buyers of any market. When a man makes bolts he knows that the purchasing agent of the firm to which he sells them will insist that they are sold at a reasonable price. But when a man sells breakfast food he goes up against the great unknown, the whim and fancy of a public that must eat to live, but that never, in school or out of it, has learned how to eat.

There are exceptions, of course. A fortunate few find wives who have been taught dietetics in cooking schools or who have mastered the intricacies of a family budget before

venturing upon the business of housekeeping; some women read the scientific journals that so admirably discuss nutrition and its allied subjects, and many more enjoy the pages of the popular monthly magazines and along with the gentle art of embroidery learn something about fancy cooking and occasionally read a well-phrased article on good housekeeping. But the canner, baker, grocer who has food to sell must remember that it is the favored and fortunate few who are either trained in school or taught by scientific or even popular journals, and that the great mass of consumers limits its reading to the daily paper.

I believe in the educational value of club work. The leagues of consumers who study marketing and who learn how to buy by careful study are of great help. Unfortunately, again, club work and study reaches comparatively few women; it never gets down to the class that most needs instruction.

If the buyer for the home, the mother and housekeeper, is to be taught better how to buy and what to buy she must be taught indirectly by the daily paper, or directly by her grocer or the manufacturer who has something to sell her and who tells her about it by demonstrators or readable circulars. In other words the educational material must come into the homes. It is all very well to use the electric sign to advertise tobacco, for men see the sign—but how many mothers of families get down town where the lights blaze out the virtues of catsup, coffee and breakfast foods?

In any campaign of education intended to inform the public how to buy food the main attack must be centered on the mother of the family, who buys 95 per cent of the foods, and not on the father who reads the signs in the street cars on his way to work or the billboards that flash past him on his travels. Of course there is some value in suggesting new foods to any member of the family group about the dinner table, but unless the suggestion is finally made to the buyer who visits the grocery it will amount to little.

My idea of education in food buying is first to popularize interest in food by well-written, simple stories in the daily paper. There is news in the story of a loaf of baker's bread, in the canning of peas and tomatoes; in the growth and preparation of tropical foods, that should be told along with the news of the movies, business and politics.

And again we must lay more stress on nutritive values. It is not enough for the buyer to know the goods her grocer sells her are good—she ought to know how good. Experts in nutrition have gone so far as to suggest that every popular manufacturer should label every package that leaves his warehouse not only with the brand, net weight of contents and his name as the producer or jobber, but that he should also declare its actual food value in terms which the public may be taught to understand.

At the present time much of our feeding is ignorantly bad. We mistake bulk for food. The poor woman fills her husband with cabbage until he thinks he is well fed, when as a matter of fact he is simply well stuffed. Her neighbor spends her money for cold sliced ham when she should be buying shoulderclod or neck. Many a woman, thriftily as she thinks, condemns her family to a diet in which vegetables are the chief factor, not realizing that most vegetables are largely water, and that water in the form of fresh fruit and vegetables is a luxury. Of course there is real need for vegetables in the diet, but they should be used intelligently and not to the exclusion of more concentrated and less expensive foods.

The average family is well fed because out of the abundance that loads the tables each member chooses, without knowing why, such amounts of the various fats, starches and proteins as are necessary. But this is hardly enough. It isn't always true and it is always expensive. If the cook knew more about food values she could use the materials from your warehouses more economically and with better results.

At the present time a discussion of food for the home as it is indulged in by the manufacturer and jobber through his publicity agent or sales manager too frequently resolves itself into the relating of innumerable receipts. What does it avail a woman to have thirty-five receipts for utilizing the remains of a roast if she does not know how to buy the

roast in the beginning? How helpful is it for the manufacturer to blazon the merits of his spaghetti or beans in expensive advertising unless he goes further and besides giving receipts tells why his particular food ought to be used? Why? Because it possesses definite food qualities; it furnishes carbohydrates cheaper than the food it displaces on the table or furnishes as much food for the same money in a more palatable form. There is a very real reason for the use of delicacies, of prettily packaged products, of carefully prepared breakfast foods, of appetizing canned goods—in fact of all the wonderful things that make a visit to a well-stocked grocery store a joy to the eye and a teaser to the appetite.

It is not necessary for me to tell you that bulk rolled oats cost only one-third as much as the prepared breakfast foods. Neither is it honest for me to tell the housewife that fact as a lesson in economy unless at the same time I tell her that what she gains in cheaper food she probably will waste in fuel and time and labor in preparing the food for service.

We cannot deny that canned goods cost more than dried beans or split peas, but if they do cost more in the can, they are worth more not only because of the minimum expense with which they can be prepared and the ease with which they can be served, but because it is possible to put the flavor of the field and the garden into the can and it is not possible to hold it in the bin of dried beans.

What a wonderful field for constructive educational effort you gentlemen are working in and how lightly you have cropped that field. I would not minimize your labors of past years. I give much of the credit for the satisfactory condition of our present food supply to you and your salesmen who know every grocer throughout your broad territory. I offer worthy praise for the wonderful improvement of the retail grocery business. I have often told my friends among the wholesale grocers of my own state that I count their representatives among the retailers better food inspectors than the men who go out from my office wearing the badge of the State Board of Health.

My opinion of the salesman who thinks his whole business is to take orders is no better than your own. I look upon the men who travel for the wholesale grocery trade as apostles of cleanliness who are not content to sell goods, but who find frequent opportunity to discuss better equipment for walls and counters, better care of refrigerators, better ways for preventing spoilage, for protecting foodstuffs and for eliminating waste. As business men, you know that it is never good business to carry on your books a grocer who is so inefficient, so ignorant of good grocery practice and so careless of the constantly increasing demand for sanitary service that he allows his trade to drift from him to his competitor across the street, who perhaps is not a customer of your house. I am sure that you welcome the advent of sanitary legislation which forces such a grocer out of business, because you know that in his place will soon be found a progressive merchant who serves his patrons well and so becomes a better customer to you.

I would have your salesman himself know more about the food he sells than its cost F. O. B. your warehouse. I would have him well posted on the many factors which ought to influence food selling and food buying; its nutritive value; the cost per pound of the elements which make it useful as food; the reasons why it ought to find a place in the dietary of the average home. If the salesman has mastered the story in the can of beans or package of cereal he can give it to the grocer's clerk in such simple form that it will eventually become common knowledge.

You see what I am driving at. I want the plain people who are not taught nutrition in the schools, who buy food and prepare it simply because they think it is cheap or know it is easy to cook, to get hold of real food truths, and I look to you, the distributors, to spread this knowledge, and the way you can do it the easiest and quickest is through your salesmen. But while you are doing this you will not neglect the opportunity to point out to the men whose goods you handle that they, too, owe a duty to the public which will not be fulfilled until they through their advertising and publicity give the consumer real food information.

Food buyers must wake up to the fact that the family

fortune rests in their hands. Extravagant food habits and ignorant buying mean poverty and probably at the same time poor feeding. Careful and intelligent buying means better food for less money and stretches the weekly wage so successfully that a surplus for the savings bank is assured. When the manufacturer, wholesaler and retailer by sane education makes the surplus possible instead of spending their energies in reducing it by fostering food fads and foolish buying, he will put the finances of the home on a safe basis and at the same time build his own business on solid rock.

The food official as you know him today is not a policeman hunting an opportunity to drag out the sordid facts of food fraud in the court room before a horde of insatiate reporters for a sensational press. He is a teacher, an organizer, a creator whose work it is to secure more food, cleaner food, cheaper food for the great public whom he serves.

I am no prophet, I try not to dream dreams, but whenever I think of the possibilities of constructive work in the departments which enforce food legislation, it seems to me that we, as officials, are but on the threshold of our real careers. Our appropriations may be inadequate, public sentiment may be dormant, our laws may not admit of so liberal a construction that we can do anything besides police work, but there are always opportunities awaiting the constructive official—there are always opportunities to organize industries for better things or to work with associations already formed for mutual service. And so I am here today to urge you if you are not already working in fullest accord with the food officials of your cities and states to get in touch with them at once; to let them know that you believe in their work; that you appreciate their services; that you understand their limitations and propose to help them to break through into a larger field for usefulness. I urge you to use the press more consistently than you do now. Fill the daily pages of your papers full of real pure food information. Get your stories before the people. Every shipment that comes to your warehouse brings a story with it that is worth the telling, and which when told makes it possible for you better to serve the consumer. Open wide your doors, bring the public in. Make them feel that it is your business to serve them and that you know that the only way your business can succeed is when you serve them well.

And now I wonder what sort of a food official you think I am. If you expected a discussion of food adulteration, I am glad I have disappointed you. If you had nerved yourself to listen to caustic criticism, I hope you are relaxed. If you have sized me up as a sort of circuit-riding preacher without any real text, I am disappointed. I hope you agree with me that the public must be better informed about its food and that you are prepared with me to go about spreading the information.

Richard Dickinson, president of the National Cannery Association, told the jobbers that the tendency of prices for canned goods will be upward during the next few years, because farm products are in greater demand and prices have risen in consequence.

Mr. Dickinson also warned the jobbers to give their serious consideration to "even money" prices as against "penny" prices. The public is complaining at the difference between the amount the manufacturer receives and the price the consumer pays for canned goods. It has come to a point, he said, where the margin of profit or the size of the container must be decreased.

Fairfax Harrison, president of the Southern Railway, came to Memphis by special train to address the grocers. He told them how the railroads of the country are seeking always to increase the efficiency of service in the economic transportation of goods, and declared that his railroad would seek to fulfill its motto, "The Southern Serves the South."

Mr. Harrison's address follows in full:

BY FAIRFAX HARRISON.

It is a great thing to be associated with a railroad that, in geographical location and extent and in the aspirations of its management, as well as in its name, is so closely identified

with an entire section of our country as the Southern Railway is with the South.

When we think of Southern Railway Company in its manifold relations to the Southern people, as a helpful factor in the business of every man along its lines and as a powerful force in Southern progress, is there not reason why every man in its employ should be proud of his job? It is with this feeling of pride in our work that I come before you to speak briefly on the relation of the railroad to your business.

The business of the wholesale grocer is one of concentration and distribution. At every step in the gathering together of your stock in trade and in its distribution to your customers transportation is a factor in your operations. In exceptional localities, like Memphis, you can, to a limited extent, depend upon water transportation, but, generally speaking, the traffic of the wholesale grocers of the South is carried by rail. As shippers you have a two-fold interest in the railroads by which you are served. You are interested in their charges for service and in their efficiency as carriers. The matter of railroad freight rates has been kept so prominently in the public mind for the past ten years that, on superficial consideration, you might think that your principal interest in the railroads was in the charges which you pay for transportation service, but I venture to suggest that if you will look deeper you will find that the adjustment of rates affecting your business has been so ironed out by the combination of forces represented by public regulation plus competition that today your interest in efficient railroad service far outweighs your interest in any possible further reduction in freight rates.

A few examples of railroad freight rates affecting your business will show that they constitute a small proportion of the wholesale prices of commodities. On sugar-cured hams, wholesaling in Memphis at 20 cents, the freight charge from Chicago is twenty-seven one-hundredths of a cent. Dry salt meats, selling at 14 cents, and canned beef, selling at about a fraction less than 25 cents a can, take the same rate.

Flour, selling here at from \$6 to \$7.50 per barrel, takes a rate of eighteen one-hundredths of a cent a pound from Chicago or Kansas City or eleven one-hundredths from St. Louis, and corn meal, selling at from \$3.65 to \$3.85 per barrel, is hauled from Chicago for sixteen one-hundredths of a cent a pound, from Kansas City for seventeen one-hundredths and from St. Louis for one-tenth of a cent.

Sugar, selling at 7.95 cents a pound, is hauled from New Orleans for twelve one-hundredths of a cent, and coffee, selling at from 12 to 30 cents a pound, is hauled from New Orleans for seventeen one-hundredths of a cent, or all the way from New York—931 miles—for forty-two one-hundredths of a cent, while salt, selling in Memphis at \$1.50 per barrel, is hauled from Pomeroy, Ohio; for only fifteen one-hundredths of a cent a pound.

There are on the shelves of every grocer articles on which the charge for rail transportation is so small that they sell for a uniform price without regard to the distance from the point of origin. Many examples of this kind will occur to the minds of each one of you. I shall mention but one. I doubt whether there is a grocer or any other retailer of tobacco in the United States who has not on his shelves two-ounce cans of a popular tobacco manufactured in Winston-Salem, North Carolina, and everywhere from the Atlantic to the Pacific and from Canada to Mexico, except, possibly, at points distant from the railroad, the price of this can is 10 cents, and the price is the same next door to the factory in Winston-Salem. For carrying a can of this tobacco from Winston-Salem to Memphis—721 miles—the Southern Railway receives a fraction over twenty-two one-hundredths of a cent.

The reasonableness of a freight rate is measured by the service performed and the illustrations that I have given seem to indicate that, as measured by this standard, railroad charges for the carriage of representative commodities which you handle are not excessive. On the contrary, they seem to me to be surprisingly low. They are so low, in fact, that I venture the assertion that your present inter-

est in railroad charges is not in securing reductions, but rather in assuring their maintenance at a level that will enable the railroads by which you are served to prosper, for it is only a prosperous railroad that can provide adequate facilities and render efficient service.

Time was when the business of the South could be handled by single-track railroads laid with light rails, with small terminal facilities, and operating short trains with light locomotives. That time has passed. The business of the South and the demands of the Southern people for railroad service are increasing from year to year and from month to month. It would be an absolute impossibility to handle the traffic of the South today with the railroad facilities of ten years ago or even with those of five years ago. If your business is to be handled promptly and satisfactorily your railroads must have sufficient carrying capacity to handle the present volume of traffic and to take care of any sudden increase. It follows that so long as the business of the South continues to grow railroad facilities must continue to expand.

I credit our advertising department by the assumption that you have all heard that "The Southern Serves the South." That alliteration is not only the statement of a fact, but it is the expression of an ambition and the acknowledgment of a duty, for we fully realize that it would be an idle and empty boast if we were not spurred on to a determination to serve the South tomorrow as well as today and to provide the increased facilities that will make it possible for us to do so. That we fully realize our responsibilities in this matter is shown by the record of what we have done and what we are now doing. Without taking into account the money expended by its affiliated companies, Southern Railway Company has expended on its lines directly operated within the twelve months ended March 31, 1916, for the construction of double tracks, the enlargement of terminal yards and freight-handling facilities and for other improvements to its roadbed and structures, \$8,700,000 in round figures. In the same period we have expended on account of new equipment \$2,823,204. Other improvements to roadbed and structures now under way and authorized will call for additional expenditures to the amount of \$9,700,000 and our outstanding obligations for equipment delivered and contracted for amount to \$18,873,630. Our purchases of materials and supplies of all kinds for the twelve months' period amounted to \$13,000,000, bringing the grand total of expenditures for improvements and betterments and purchases in the twelve months and those immediately in sight for the future up to the very respectable figure of \$53,096,834.

But we can not stop there. A railroad is never finished except in a dead country, and the South is not a dead country. The resources and opportunities of our section are daily becoming better understood, and I venture the prediction that the progress of the past ten years, great as it has been, will be surpassed in the ten years to come, and this will mean that we must go on extending our double-track mileage as the traffic on additional parts of our system becomes too heavy to be handled on a single track, replacing light rails with those of heavier section, providing more and heavier locomotives, enlarging terminal facilities at points where congestion threatens and buying thousands of freight and passenger cars. We have right here at Memphis an admirable illustration of the character of improvements that we have made, that we are now making and that we must continue to make in the future. Our terminal facilities at this point were rapidly becoming inadequate for handling the freight to and from Memphis and that which passes through this gateway. To provide for the present and for the growth of years to come any makeshift enlargement would have been utterly inadequate. We took up the problem in a broad way and the result is the new Forrest yard recently finished at a cost of \$760,000. This is an improvement in the interest not only of the people of Memphis, but of every man on the Southern Railway system who ships goods to or from Memphis or through the Memphis gateway. In like manner the double-track work and other improvements now being made on the line between Washington and Atlanta are of benefit not only to the communities

directly along that line, but to those on all parts of the system, as they will greatly facilitate the movement of traffic over the entire Southern Railway system and connecting lines. On a great railroad like the Southern no improvement is entirely local in its effects and it is obvious that the grocer in Memphis would be as much discommoded if a shipment from New York or Philadelphia should be delayed in Virginia as if the delay should occur on the Memphis Division.

While your interest in the Southern Railway is primarily in its ability to provide prompt and efficient service, you also have a vital interest in the effect of its large and regular disbursements upon the general business of the South. By far the greater part of the \$8,700,000 expended for improvements and betterments and of the \$13,000,000 expended for purchases in the twelve months ended March 31 were paid out in the South and found their way into the local channels of trade. There are on our pay-rolls in the South, in round numbers, 45,000 persons receiving in wages annually more than \$28,000,000. When you consider that, on the conventional basis of five to a family, this means that more than 200,000 Southern people derive their living directly from Southern Railway Company, you will realize what its pay-rolls mean to the grocery business of the South and will appreciate that it is directly to your interest that our business shall continue to grow, requiring and enabling us to increase the number of our employees.

Coming ahead even of our pay-roll is our payment of taxes which, for Southern Railway Company alone, amount to \$2,800,000 a year, representing our contribution to the support of the public schools, the construction and maintenance of highways, the salaries of public officers and all the other expenses of government in the states, counties and municipalities along our lines.

I need only to refer to expenditures such as I have enumerated to impress an audience such as this with their importance to the business interests of the South as a whole, and especially to your business of supplying a large proportion of the necessities of life to the Southern people. You had last year a practical illustration of what any unfavorable conditions affecting Southern Railway Company and necessitating the curtailing of its expenditures mean. You know how seriously our traffic was affected by the collapse of the cotton market and the abrupt halt to Southern business which followed the beginning of the war in Europe. The salaries of our officers were reduced, the opportunity of all our men to earn wages was at a minimum, and I do not believe there is a man in this audience from a locality on our lines whose business was not adversely affected, directly or indirectly, by the contraction of our wage-paying and purchasing power. On the other hand, favorable conditions, bringing prosperity to the company and enabling it to expand its operations on all parts of the system, must be beneficial to each one of you. You have nothing to fear if we should be prosperous unless you fear more money in circulation and a larger consumption of groceries.

It is our ambition and intention to make good our declaration that "The Southern Serves the South," and it is our belief that in the years to come we shall share with the wholesale grocers and all the Southern people in the ever-increasing prosperity of our section.

At the close of the day's program the grocers and their ladies boarded the excursion steamer *Idlewild* for an evening cruise on the Mississippi River. Dinner was served aboard, and later there was music and dancing.

The convention was opened promptly at 10 a. m. by J. H. McLaurin of Jacksonville, Fla., president of the association, and the opening formalities began immediately after the Rev. T. W. Lewis had invoked divine blessing.

Gov. Tom C. Rye of Tennessee was detained at Nashville by illness in his family, but the grocers and manufacturers were welcomed cordially to Memphis by Mayor T. C. Ashcroft on behalf of the city and by J. R. Paine, chairman of the committee on arrangements, on behalf of the Memphis wholesale grocers.

Albert P. Bush of Mobile responded in an address which strongly praised Memphis, the South and the nation. He

declared that the business men of the country are optimistic just now. The basis of their optimism, he said, is the fact that one-third of the world's wealth is centered in the United States.

"The South contributes a large share of the total wealth," he said, "and the Southern wholesale grocers, with \$150,000,000 capital and an annual business of \$1,000,000,000, are of no small importance in the welfare and prosperity of the South."

Dr. Carl L. Alsberg, chief of the bureau of chemistry, United States Department of Agriculture, told the grocers that the pure food and drug act was designed not only to safeguard the health of the consumers, but for the prevention of unfair competition among producers and distributors as well.

It has become more and more evident, Dr. Alsberg said, that the majority of the violations of the pure food law are due to carelessness, ignorance and inefficient methods, rather than to wilful noncompliance with the law.

The bureau of chemistry, therefore, has set about to educate the producers in all the methods necessary, to the end that they may put out better products and eliminate waste, Dr. Alsberg said. The bureau first undertook a multifarious study of all branches of the food industry.

In relating a few of the conditions the bureau had improved, Dr. Alsberg told how borax was eliminated from the preservation of perishables, such as shrimps, shipped from South to North. When the pure food act barred borax, he said, shippers protested that their industry was ruined. The bureau made an investigation and found that at slight cost shrimps could be shipped in ice packs, and the industry was brought within the law and put upon a more healthful basis.

The bureau's work in reducing the enormous loss from breakage in the shipment of eggs, Dr. Alsberg said, was another notable achievement. When the attention of the bureau was called to the fact that the breakage loss approximated \$50,000,000 a year, the Federal workers set about to ascertain the cause. By installing in freight cars instruments similar to those used to record earthquake shocks, it was established that the greatest breakage resulted in switching yards.

Some of the railroads, he said, were paying enormous claims for broken eggs, and when their attention was called to the shock record, they immediately set about to minimize rough handling of freight cars in switching yards, with the result that the breakage loss dropped in a remarkable degree.

Dr. Alsberg's address follows:

By DR. CARL L. ALSBERG.

Mr. President, Ladies and Gentlemen: Your Honorable President has asked me to take as the subject of my little talk this morning a description in a general way of the work of the Bureau of Chemistry of the Department of Agriculture.

Undoubtedly, in the minds of a majority of you, the Bureau of Chemistry is more or less synonymous with the enforcement of the Federal Food and Drug Act. That, however, is not the only function that the Bureau of Chemistry performs. And I am going to endeavor this morning to sketch for you in a general way some of the more important activities of that bureau, or at least what appear to me to be the more important activities of the Bureau of Chemistry. I shall therefore begin with a little discussion of certain features of the Food and Drug Act.

When it is my privilege to address an audience of consumers, I present to them the Food and Drug Act as wise legislation for their protection. When, however, it is my privilege, as it is this morning, to address an audience of progressive distributors and producers, I endeavor to present the Food and Drug Act from a different angle. I endeavor to present it to them from the angle of unfair competition. I endeavor to make them realize that while much is said concerning the Food and Drug Act as legislation for the purpose of protecting the consumer, it is equally an act for the prevention of unfair competition among producers and distributors. That is the side of the law which is not often enough, in my opinion, emphasized. The law is usually presented as a public health measure, as a measure for the prevention of

a practice of deception upon the consumer. It is that; it is more than that; it is also a law for the prevention of unfair competition among the producers themselves and the distributors.

Now, I know of no better way to illustrate that fact than to mention the most recent amendment to the Pure Food and Drug Act, the so-called G—— amendment, or, as it is known in ordinary language, the net weight amendment to the Pure Food and Drug Act, passed on the 3rd day of March, 1913, in the last term of Taft administration and going into effect eighteen months later. That amendment to the Food and Drug Act states that if food be put up in the form of packages, the outside of the package must bear a plain and correct statement of the quality of food within that package. That is not a sanitary measure; it is not a hygienic measure. It is merely a measure to prevent misrepresentation; a measure for the purpose of compelling all those who deal in food in package form to do business on the aboveboard basis. It has nothing to do with hygiene, with public health. It is solely and simply a measure to protect the consumer, and it does so by preventing certain forms of unfair competition among those who sell to the consumer; unfair competition with reference to short-weighting and short measure. If I can make it evident to this audience the Food and Drug Act is such an act as to prevent unfair competition; that it protects every one of you as much as it protects those to whom you sell; if I could get that point to you concerning the Food and Drug Act this morning, I will at least feel that my time has been more than well spent while coming out here and presenting that aspect of the law to you.

It has become more and more evident, in connection with the administration of that law that very many, possibly the bulk of the violations of the law, are due either to carelessness or ignorance, or to out-of-date and inefficient methods of handling foods and drugs; and that only in a certain proportion, it is impossible to say what proportion, but only in a certain proportion of cases, is there any wilful intent on the part of the party violating the Food and Drug Act. That makes it quite evident in the enforcement of the law that it is not sufficient merely to prosecute the violaters, but at least efficient and perhaps more efficient methods of obtaining compliance with the law is to educate those among the producers and distributors who are violating the law through ignorance or carelessness—to educate them in the method which it is necessary to employ in order—not merely to put out products which are not in violation of the law, but also products which are better, more economical and which involve the elimination of their waste.

So the Bureau of Chemistry in the Department of Agriculture has been active in making the most multifarious study in all branches of the food industry. And I am going to lay before you a few examples of the type of work looking to better methods of production, elimination of waste, utilization of waste that the bureau has been engaged upon.

To take, for example, a recent instance. There is a trade, or was a trade, in shrimp. These creatures abound in the waters of Georgia, Florida and Gulf of Mexico. Considerable quantities are canned. But there is a demand in the markets of the North for fresh shrimp, at any rate; for shrimp which have been boiled, but not canned or otherwise treated. The shipment of these perishables from, let us say, New Brunswick to New York, is not an easy matter. Unless special methods are used, they will not arrive in the northern markets in condition fit to eat. Now the men who were shipping this food were preserving it, or at least some of it, with borax, which has been held to be a violation of the law. Preventing them from using a preservative of this kind made it impossible for them to do business, so they thought. It resulted, therefore, in taking off the market a good and satisfactory article of food, which did not seem to be good public policy.

It therefore devolved upon the Bureau of Chemistry to investigate the methods of shipping shrimp to see if it were not possible to ship shrimp from the southern markets to the markets of the North without preservatives and in good order. The bureau made such an investigation and found

that it was a very simple matter, by proper handling, and by the use of only a limited amount of ice, to ship the shrimp so they would arrive in perfectly satisfactory condition.

Now, that industry is about to flourish again and the men who are in it are in position to continue their business without violating the law.

The shipment of poultry and eggs is another example of the type of work the bureau has been doing. A conservative estimate places the loss of eggs due to breakage in transit throughout the United States at something like fifty millions of dollars, a very considerable item. It devolved upon the bureau to see whether a method of handling and transporting poultry and eggs could not be devised which would eliminate some of that waste. The first thing that occurred was to see if it were not possible to eliminate some of the breakage. In order to do that, it was necessary to find out first, where, upon the railroads, most of the breakage occurred. So the investigating committee constructed a special instrument which was built exactly like or similar to the instrument known as the seismograph, used to record earthquakes on. They made an instrument on that principle and put it into a carload of eggs and got a record of the shocks to which that car was subjected all the way from, say, Nashville or Indianapolis, to New York or Philadelphia, and they found out exactly where the most breakage occurred and they found it usually occurred in the switching yards, where the cars were battered around in switching, and they found that certain switching yards were worse than others. Of all the railroads coming through Philadelphia, there was one that had 50 per cent more breakage than any of the others. Of course, it was a simple matter to take that up with that particular railroad. So the record of shocks were a subject of particular note to the railroads, since they were paying enormous claims for broken eggs, and, of course, they immediately got busy and made an investigation and very largely eliminated the breakage that occurred in that particular part of their system. They studied a little further in the change in the method of packing eggs in cases and particularly in the method of storing egg cases in the cars. The result of that has been that in the last four years the enormous amount of claims that have been made against the railroads in the metropolitan district of New York for broken eggs have dwindled from a good many hundred thousands of dollars a year to a very small sum indeed. Those are not claims allowed, but all claims actually made. Presumably the amount of claims the railroads allowed was still less. The records have been published by the Interstate Commerce Commission and are available to any of you who may be interested.

With the poultry we have been doing somewhat of a similar work. We found some years ago that every time we had a warm Thanksgiving there were a great many carloads of turkey from this section and from southwest Texas that arrived in the northern markets in more or less decayed condition. We had to condemn them under the Food and Drug Act and it meant so much absolute loss and waste; and the question then arose, no one being responsible for their bad condition except the weather, nobody being to blame, it would not be fair to punish any one for the arrival of a carload of turkeys in bad order. The thing obviously to do was to see why they arrived in bad order and to devise ways and means for preventing their arrival in bad order. So that we had to take up the question of refrigeration, the question of packing poultry, refrigerating in transit and all those questions that have to do with the spoilage of perishable products. We have been able to devise, that is, our engineers have been able to devise, a small ice box cooler which cost a few hundred, which the small country shipper can put in and cool his poultry or eggs, so when they get loaded in the car, they are chilled through and through, are kept in a frozen state and the consequence is that the goods arrive in first-class condition, no matter what the weather may be. The consequence has been that during the past year, during the past two or three years, we have had very few shipments of poultry to condemn in comparison with the poultry we have condemned in former years. Not only that, but the man who is shipping poultry in that dry manner, instead of putting it into barrels with ice, is shipping an article which gets

a better price on the market. We had an interesting demonstration of that last year. We put in at a small town in the Middle West one of these pre-cooling ice boxes. Two dealers in the town, one co-operating with us and the other one did not desire to co-operate with us, and they both were shipping carload of poultry a week. One man averaged from three-quarters of a cent to a cent and a half more possibly than the other. The one who shipped with pre-coolers as compared with the man who shipped in barrels with ice. The result was the man who was not co-operating with us is now putting in his ice boxes the same as the other fellow. We think there is going to be an elimination of waste and elimination of violation of the law in consequence of that work.

I might cite another instance which has to do with perishables. Those of you who come from Kentucky know there is a good deal of salt made along the Ohio river, particularly in the northeastern part of the state. A good deal of it is made in West Virginia and Ohio. It is a characteristic of the salt and brine that is pumped out in all that region that it contains some quantity of a certain poisonous mineral. The consequence is the man who boils the salt in those brines cannot boil the brine down very far, because if he does he will get some of the poisonous mineral into the table salt. The result is he has to discard a very considerable amount of salt in his brines. Sometimes carelessly he boils down too far and gets some very poisonous chemicals into his table salt, and when he does, it is a violation of the law. Usually he does not know it, where he is no chemist, and has no chemist at his disposal, and does not know how much of this poisonous mineral he is getting into his table salt. It seems to us, under the circumstances, that it would be better to show the salt-makers how to get rid of this poisonous ingredient in their brine altogether than to prosecute them now and then, when, through carelessness or ignorance or negligence they have gotten some of it into their table salt. We felt at the same time a desire to protect the consumer, and sent a chemist to one of the plants. They turned the plant over to us, and by experimenting for six or eight months we devised means by which before the brine is boiled down all the poisonous mineral is taken out and they may boil the brine down as far as they like and there is no poisonous mineral in it. In consequence of that, the plant that produced 350 barrels of salt a day and 50 or 60 barrels of low-grade salt containing poisonous mineral for glass works—they have produced no low-grade salt at all, only high-grade salt, and, of course, that plant is making a difference in price of fifty and seventy-five cents a barrel between high-grade and off-grade salt which could be used only in manufacturing purposes.

We also have had much to do with canning of all kinds of products. We have a laboratory in which we have endeavored to study the canning of all kinds of products for the purpose of showing canners, as far as we are able, how to make a clean and wholesome product, and usually we endeavor to incorporate with that idea the elimination of waste. We have had particularly much to do with the canning of sardines in recent years. Of course, there is no reason why our American sardines, properly packed in proper oil, should not be as good an article as the imported. Just at the present time is a favorable time for the sardine packer to take advantage of what we have been trying to teach them. There are very few sardines coming in from abroad, and if the sardine packer will put up, according to general instructions we have been able to give them for sardines of high-grade, there is no reason why they should not take away and dispose of a very considerable portion of the market for imported sardines.

I might go along for a long time in discussing various types of work we have been doing in an endeavor to improve manufacture of food; but if you will bear with me, I will turn from that phase of the work to some other phases which have not to do with food. You see, the Bureau of Chemistry existed before the Food and Drug Act.

In the Pacific Northwest, during the wheat harvesting, the wheat which is thrashed there is often very (smutty(?)) The result is there is a cloud of dust in and around a thrashing machine, and if you get combustible material in sufficient

state mixed in proper proportions with air, you will get a mixture which will explode the same as gas when properly mixed with air will explode. So dust, when properly mixed with the right proportions of air, will develop more pressure than gas under its pressure conditions. Now, in the Northwest, they get a spark in thrashing wheat, because the belt develops electricity; you take a spark from the belt or from a stone getting in between the moving parts of the machine—you know how a belt running over a pulley will develop electricity—the spark coming in contact with the dust ignites it and an explosion occurs which wrecks the machine; the machine is burned up, as well as the hay stack and often the grain. In the summer of 1914, which was a particularly bad one, because it was very dry, and the grain was very dry, more than 300 thrashing machines blew up and burned, and the total loss in the Pacific Northwest was something between one and one and a quarter million dollars. It was up to the Department of Agriculture to find ways and means to prevent those accidents, and we have carried on an investigation which has resulted in the completion of devices that will prevent these explosions. Last summer we equipped a set of machines with these devices and they went through without accidents, whereas machines not so equipped blew up all around them. This work has been extended to explosions in grain elevators. We feel that it properly comes in the Department of Agriculture, because the tendency today is not to limit the activities of the department to protection of crops and farm products, but also to their market and their manufacture; because you can't have successful farming, you can't have prosperous farming, unless you look out for the most advantageous methods of marketing and the most advantageous methods of transporting products produced on the farm; and for that reason the department is investigating a whole series of industries which use farm products as the raw material. I won't have time to discuss all those industries at the present time.

Now, gentlemen, I have given you a rough sketch of something we have been doing in the Bureau of Chemistry, and if there is anything I have touched upon that is of interest to you specially, I will be very glad to go into the matter in detail with you any time this afternoon.

Service to the public was the keynote of Mr. McLaurin's annual address, which was one of the finest ever made before the association. He condemned those who sought to assail the manufacturing interests, and affirmed his belief that manufacturers, distributors and retailers are co-operating to render the maximum service to the public in the economic distribution of food. He was applauded when he declared that the wholesale grocers should seek to develop storekeepers into merchants.

Reports of the various officers of the association showed the organization to be in prosperous condition. T. H. Scovall, chairman of the membership committee, reported a net gain of 61 new members during the year, bringing the total to 328 members.

Repeal of the national bankruptcy law in its present form was advocated by the Southern Wholesale Grocers' Association in the closing session of its annual convention here Friday.

Abolishment of the statutes on this subject followed a general discussion led by O. B. McGlasson of Chicago, president of the Antibankruptcy Law Association. He was opposed by J. H. Trego, secretary-treasurer of the National Association of Credit Men.

Other speakers on the same subject were R. V. Covington of Jacksonville, Fla.; Morris Stern, Galveston, Tex.; B. F. Caston, Baltimore; Israel Peres, Memphis.

"The national bankruptcy law permits cheats, frauds, swindlers and scoundrels to put it over on the business men," declared McGlasson. "It takes five lawyers to put a bankrupt away peacefully, and many firms have found it more economical to lose the amount of their claims than to hire a lawyer to look after their interests. The average collections of the unsecured creditors in bankrupt claims is 7 per cent.

"The law was intended for use of the merchant. I tell

you, gentlemen, that the distribution of assets of an insolvent through the bankrupt courts is a failure."

"It is not the fault of the bankruptcy law," said Trego, "but the credit men themselves, when they give credit to merchants who are already insolvent. I believe that the repeal of the national bankruptcy law would be the greatest disaster that this country has ever seen."

The grocers brought their formal convention to a close Thursday night, when a banquet was served at Hotel Gayoso. Several speakers of national prominence made talks. W. W. Mallory acted as toastmaster of the occasion. He suggested to the grocers that they make Memphis their permanent convention city.

The addresses ranged from preparedness to prosperity. Dr. E. E. Pratt told the gathering that the United States is more prosperous today than ever before. He talked on "Domestic Prosperity and Foreign Trade." Dr. Pratt is chief of the bureau of foreign and domestic commerce, with headquarters at Washington, D. C. He said:

BY DR. E. E. PRATT.

There is an increasing tendency these days to take stock of our industrial, commercial and financial situation. It is a most encouraging tendency, for in the not far distant future we are going to be put to a great test—perhaps a greater test than that which we passed so successfully during the dark days that followed the declaration of war. We are now, or should be, thinking of the great readjustment. It is stock-taking time.

Questions are being asked on all sides. What is our actual condition here at home? asks a cautious banker. How much exaggeration is there in all this talk about prosperity? asks a manufacturer who doesn't always believe even when he sees. A great many of our business friends are trying to find out what the return of peace will mean to our industries. They want to know if their war business will be cut off in a day and if there will be a flood of cheap goods from Europe and Asia? There also seems to exist in some quarters a question as to the permanence of the foreign trade we have won. Some folks seem to question our ability to hold it after the war is over.

Now I won't pretend to be able to finally settle all these questions. But I shall attempt to emphasize some of the important points which I think should be emphasized at this time. I hope to be able to slightly illuminate a discussion of these matters. They are points that have a direct bearing on the industry and commerce of this country.

The prosperity of the United States is almost unprecedented. All parts of the country are sharing in the advantages of a great production, of high prices, and continually increasing profits. Our products, even at high prices, are in great demand, not only at home but abroad as well. The best indices of the domestic prosperity of the United States are the railway earnings, production of pig iron, building operations, bank clearances, and a study of the statistics relating to each of these lines at present time will quickly reveal the reality of our prosperity.

Enormous as has been the increase in our domestic trade, that increase is scarcely to be compared with the increase in our foreign trade. The mere statement that our foreign trade in the calendar year 1915 amounted to \$5,333,000,000 as compared with our total foreign trade in 1913 of \$4,277,000,000 means little or nothing to the layman. At the present rate our foreign trade will amount to \$6,300,000,000 for the fiscal year ending July 1, 1916. To be told, however that our exports have increased from \$2,484,000,000 in the calendar year 1913, to \$3,555,000,000 in 1915 may be a more tangible idea. It certainly has a significance to every one of us when we consider these exports consist of cotton, wheat, corn, flour, iron and steel, coal, lumber, agricultural implements, boots and shoes, cotton goods, woolen goods, canned goods, and a host of others. It is also worth while for us to keep in mind the fact that these goods which are exported are grown in the same fields with the products which remain in the United States, are mined from the same mines, are cut from the same forests, are smelted in the same blast furnaces, are manufactured in the same factories, are hauled on

the same railways, and it is only when they have reached the seaboard that they cease to be a part of our domestic trade and are then sent to foreign countries.

Astonishing as it may appear to those who do not know the facts, the increase in the exports of munitions has actually been less than the increase in the amount of secondary war supplies exported or the items that have no direct relations whatever to the war. As a matter of fact that largest increase in exports has occurred in the groups which might be called secondary war supplies, and those articles which have no direct connection with the war. The smallest increase in actual amount has taken place in the direct munitions of war. The actual amount of increase in the direct exportations of munitions of war to belligerent countries for the six months ending December 31, 1915, was approximately \$153,000,000. The actual increase in exports of secondary war supplies to the belligerent countries for the same period amounted to approximately \$195,000,000. While the total amount of increase of exportations which have no direct relation to the activities of belligerent nations and of all other products to belligerent and to neutral nations has amounted to approximately \$188,000,000.

Still further and one of our most important items has been the increase in the exports to nations outside the war zone. These facts indicate that for the very latest period on which figures are obtainable our exports to Canada have increased by 22.6 per cent, to Central America by 33.9 per cent, to South America by 31.8 per cent, to Australia by 17.5 per cent, to Africa by 51.5 per cent, and to Russia and Asia and Japan by 135 per cent.

The increase in our exports to countries entirely outside the war zone is the really significant lesson drawn by these statistics. Our trade to Europe caused by the war, perhaps has increased. We can't get away from that fact, but it is more important and has deeper meaning that our trade with countries only indirectly affected by the war has increased and that that increase has been a very considerable one.

What part of the increase in our exports other than those which are directly concerned with the belligerent activities of the belligerent nations is due to the fact that the energies of those nations have been withdrawn from their usual pursuits and are now unable to make for themselves the things which they formerly made it is, of course, impossible for us to say. How large a part of that activity which has been carried on by them in normal times has been transferred to this country likewise can not be estimated. How far the belligerent nations have actually cut down their consumption cannot be gauged. How far we are taking the place of the great exporting nations of Europe in the neutral markets of the world can only be approximated. Exact figures can not be obtained and figures of almost any kind would be almost wholly misleading. We must, therefore, depend upon such meager sources as we have at our command, and upon the best *a priori* conclusions which we can draw.

Before expressing his own opinion as to what effect the coming of peace will have on the industries and commerce of the country, Dr. Pratt discussed the two points of view on the subject—the pessimistic and the optimistic. The pessimistic view, with which the speaker said he was entirely out of sympathy, holds that the nations now at war will have to make strenuous efforts to pay off their war debts, and that they will be prepared to get foreign trade at any cost, even if it is necessary to sell below cost; labor will be cheaper when the armies are disbanded and men are plentiful; the women who have been taught the trades will not be soon displaced; cheap goods will be manufactured in great quantities; the United States and Latin America will be the cock-pit of an economic struggle between the European nations.

The optimistic view of the situation, which the speaker said is the correct and logical one, holds that the great war debts will mean greatly increased taxes and that practically all the elements entering into cost of production will consequently be raised. It holds that the good-will so important in selling goods has already been lost to many of the bel-

ligerent nations. The labor and supervising force will be considerably reduced and its efficiency impaired. European capital during the last few months has been withdrawn from productive uses and will still further withdraw before the end of the war. Renewals and repairs have not been made. There will be a great demand for capital when peace is made, and interest will be high.

In conclusion Dr. Pratt made the following cheerful forecast of what peace will mean for the business of the country:

"Our economic future rests squarely on the success of our foreign trade. The success of our foreign trade rests squarely upon our ability to compete in the neutral markets of the world with our past and future European competitors. I believe that the logic of the situation and the experience which past conflicts has taught us points certainly and unmistakably in that direction. American manufacturers and exporters who are closest to the firing line are those who are most confident that we will retain and extend our foreign trade. There seems to be, therefore, that with the proper care and with sufficient preparedness financially, industrially, and commercially that we will become the most important factor in world commerce.

"It seems to me that the evidence also points to a period of continued prosperity in the United States. He would indeed be an unwise prophet who would attempt to predict the exact effect of the cessation of hostilities in Europe upon the United States. We can face these consequences with courage and optimism founded upon facts. We must not forget the increased cost of production in Europe. We must not forget the immense advantage which we will have in accumulated stores of capital. We must not forget that we have a scientific banking system which will probably prevent the recurrence of serious financial panics. We should not forget that we have acquired prestige and good-will in the markets of the world, markets which formerly knew us not and of which we knew less. We must not forget that we have acquired an international point of view in political as well as in commercial affairs. These are considerations which should give us the greatest courage in looking forward to the result of the European war. We face the situation whatever it may be with the knowledge that we are better prepared than ever before. The facts seem to indicate that if we are properly prepared, the United States will experience a period of prosperity and expansion in trade at home and abroad."

Other speakers of the evening were Caruthers Ewing, Rabbi W. H. Fineshriber and H. M. Cottrell, of the Memphis farm development bureau.

The music and cabaret entertainments, which were arranged by C. O. Finne, was a delightful feature of the banquet. The gathering also complimented J. R. Paine, chairman of the Memphis committee on arrangements, for the splendid manner in which they have handled every detail in connection with the convention.

The last piece of business coming before the grocers' convention Thursday afternoon was the election of officers.

The new officers are as follows:

J. H. McLaurin, Jacksonville, Fla., president; J. R. Paine, Memphis, first vice-president; Frank Lanier, Americus, Ga., second vice-president; J. M. Wood, Brookhaven, Mass., third vice-president; Leon Goodman, San Antonio, Texas, fourth vice-president; James Lasseter, Jacksonville, Fla., treasurer; Mrs. N. J. Hunter, Jacksonville, Fla., secretary.

The directors who will serve during the ensuing year are as follows:

Alabama—S. J. Carroll, of Ozark; S. A. Stapleton, of Dothan, and Sam Kaufman, of Montgomery.

Arkansas—Will Pyles, of Blytheville; B. D. Crane, of Fort Smith, and J. W. Hollecan, of Camden.

District of Columbia—John B. Earnshaw, of Washington.

Florida—E. J. Keefe, of Tampa; B. D. Hartsfield, of Gainesville, and J. D. Holmes, of Jacksonville.

Georgia—E. L. Adams, of Atlanta; R. C. Corbin, of Macon, and J. B. Mayer, of Bainbridge.

Louisiana—R. R. Percy, of Thibodaux; B. F. Thompson, of Alexandria, and W. C. Marshall, of Shreveport.

Mississippi—W. T. Reeves, of Tupelo; R. H. Glenn, of Jackson, and J. D. Duncan, of Greenwood.

North Carolina—R. A. Morrow, of Monroe; George F. Edwards, of Rocky Mount, and F. E. Hashhagen, of Wilmington.

Oklahoma—H. M. Chestnutt, of Muskogee; E. A. Humphrey, of Clinton, and J. R. Pennington, of Ardmore.

South Carolina—A. Rytenberg, of Sumter, L. A. Melchers, of Charleston, and John A. Russell, of Greenville.

Tennessee—Milton H. Hunt, of Memphis; Lester Cheek, of Nashville, and Ben A. Morton, of Knoxville.

Texas—T. S. Reed, of Beaumont; W. D. Cleveland, Jr., of Houston, and B. G. Batier, of Abilene.

Virginia—J. E. Legord, of Abingdon; B. F. Donovan, of Clifton, and C. E. Herbert, of Norfolk.

President McLaurin was elected by a rising vote. It was the seventh consecutive time he has been elected to the office.

Following the election of officers the delegates entered more than 200 automobiles decorated with the Stars and Stripes and were whirled over the city's boulevards and parkways.

Galveston, Texas, was selected for next year's convention. The following resolutions were adopted:

Resolved, That the Southern Wholesale Grocers' Association, in convention assembled in the city of Memphis, Tenn., May 25th, 1916, hereby expresses to the Hon. Woodrow Wilson, president of these United States, its appreciation of his having kept us free from international war, and that we join him in invoking Divine aid that our men and means may be used for international peace, and the betterment of mankind, rather than bloodshed.

Resolved, That a copy of this resolution be forwarded to Hon. Woodrow Wilson, president of the United States.

We believe that uniformity, both state and national, in food and drug regulation, is vitally essential to the welfare of all of the people of our country, irrespective of geographical location.

Therefore Be It Resolved, That this association favors such uniformity and endorses the work of the special committee appointed by the Chamber of Commerce of the United States looking toward the accomplishment of this end.

We go on record as asking the manufacturers to prepay the freight or deduct the full amount of freight from invoice on all shipments sold delivered.

It being our strong desire to serve the public most effectively, we therefore express our great appreciation of the co-operation given us by the various retail organizations in our territory, and would encourage them by all legitimate and honorable means to work with us more closely in the future, to the advancement of our mutual interests, as well as that of the consumer.

Resolved, That the position taken by this association at previous conventions, with reference to free deals and bonuses to salesmen, be reaffirmed.

We recommend that the traffic department of our organization take up vigorously the matter of carload rates, and less than carload rates, from defined territory to what is commonly called the Southeastern territory, with a view of arriving at the justice of securing differentials.

Resolved, That the members of this association, and jobbers generally throughout the South, are deeply indebted to the president of this association and his co-workers, the vice-presidents, executive committee and board of directors, as well as the members of the several standing committees, for their able, untiring efforts and valuable accomplishments in their behalf. The attendance and interest in this convention is positive proof of a most healthy and substantial growth in interest in the work of the association and the principles for which it stands. This condition is undoubtedly the result of the efforts of our president and his co-workers to put the association on a high plane and demonstrate to the jobbers of the South that the organization stands for righteousness in business, and a square deal for every unit in the distribution of food products.

We recognize the services being rendered by the Federal Trade Commission to the trade life of this country, and we pledge ourselves to render support and co-operation in all

matters looking to the development and uplift of the commercial life of the country.

We have considered with much interest and gratification the splendid activities of the Federal Reserve Board in their efforts to promote the highest and best welfare of the financial and commercial life of America, and we acknowledge with highest appreciation the very pronounced service that they have up to this time rendered the business life of the country; and viewing with much interest the great potentialities of their continued work, we pledge ourselves to co-operate with the board in their further efforts to upbuild and promote the welfare of the nation.

Whereas, The application of the long and short haul clause has in some ways readjusted the matter of milling in transit on the part of millers and jobbers; be it

Resolved, That our traffic department be requested to enter into full details pertaining to this matter and endeavor to evolve a condition that will be just and equitable to all.

Whereas, It is the object of the Southern Wholesale Grocers' Association to serve the wholesale grocers of the South in every way possible; and

Whereas, It is legitimate for the association to point out ways and means whereby the expense accounts of its members can be reduced; and

Whereas, At the present time a very large percentage of our members are now carrying insurance in the Warner Inter-Insurance Bureau;

Now, therefore, we, the Southern Wholesale Grocers' Association, hereby recommend the Warner Inter-Insurance for their individual investigation.

Resolved, That we express to Mrs. Samuel H. Phillips our appreciation of her interest and activities in Facts and Figures.

Resolved, That the sincere thanks of this convention are due the manufacturers for their attendance and interests in this convention, and to the several able speakers who have addressed us on vital subjects, and especially are we indebted to Dr. Carl L. Alsberg, chief chemist, Department of Agriculture; Mr. Richard Dickinson, president of the National Cannery Association; Mr. Fairfax Harrison, president of the Southern Railway; Dr. H. W. Barnard, State Food and Drug Commissioner of Indiana, and others.

Resolved, That we express our sincere thanks and appreciation for the many courtesies shown us, to the chairman of the entertainment committee and his able associates; to the ladies' committee of entertainment; to the ministers of the city; to the press; to the hotel management; and to all who have so lavishly contributed to our entertainment and enjoyment in the city of Memphis.

FIFTEEN HUNDRED SECURE CERTIFICATES.

Dr. Herman G. Morgan, city sanitarian of Indianapolis, said recently that since the Board of Public Health made effective some weeks ago its order requiring all food handlers, such as restaurant, bakery, soda fountain and candy factory employes, to procure certificates of good health, more than 1,500 such employes have qualified to hold their positions under the ruling of the board.

The board has no record of the number of food handlers who have been discharged by their employers because they were unable to procure certificates of good health, but Dr. Morgan said that to his knowledge employment in food establishments had been denied to at least twelve persons.

Dr. Morgan said the employes themselves, in many establishments, have assisted the health authorities by pointing out persons among their number who are suffering from contagious diseases. They have done this, he said, because they do not desire to work with diseased persons.

The health board estimates that there are approximately 6,000 food handlers in Indianapolis. It will require several months to compel all these employes to procure health certificates. Dr. Morgan said the board intends to cause all of the food handlers to be examined at least once each year and to file their certificates in the board's office.



Washington D. C. News Letter



WASHINGTON, May 30.—The Food and Drugs Act, in all its parts, applies to Coca Cola and all other foods, drinks and drugs, even if they are made according to formulas made up before the passage of the act and even if the "added ingredient" always has been a component and its absence would make the food, drink or drug, a case of Hamlet with the pessimistic princelet absent therefrom. That is the meaning of the opinion handed down by Associate Justice Hughes on May 22 in connection with a decision of the Supreme Court of the United States reversing the District and Circuit courts in the case of the United States vs. Forty Barrels and Twenty Kegs of Coca Cola, the Coca Cola Company of Atlanta, Georgia, claimant, commonly known as the Coca Cola case.

The Supreme Court, to reach the conclusion it did, followed the contentions made by George P. McCabe while he was solicitor of the Department of Agriculture, and William Parker Jones, now assistant chief of the Bureau of Chemistry, but then an assistant to McCabe. Justice Hughes, to rid himself of the incongruities following any effort to define the word "added," said the act supplied its own glossary. In other words, Congress, for the purposes of the Food and Drugs Act, attached meanings to words that no dictionary maker ever imagined, not even excluding Dr. Johnson, who, it is admitted, was some dictionary maker. The justice must have laughed in his whiskers when he dismissed that phase of the case in the manner employed.

This decision, while of the utmost importance to the food and drug world, is of no greater importance than the decision in the Pittsburgh Melting Company case, decided by Judge McPherson, sitting at Philadelphia. In that case the melting company refused to give any attention to the meat inspection law. It gathered fat from local meat shops and slaughter houses having no federal inspection and sent the oil and grease extracted from such odds and ends of meat into interstate commerce, without paying any attention to that of the meat inspection law requiring marking of meat food products, claiming the law does not apply to inedible fat such as it claimed it was sending into commerce between states and foreign countries. The government claimed the fat could be used for food purposes, inasmuch as it was not denatured, and, therefore, it was a violation of the meat inspection law.

The principles laid down in the coca cola case, however, will be of wider application, hence, without doubt, it will be regarded as of superior importance. The Supreme Court has made the act workable, in the manner suggested by the Food and Drug officials, that Congress intended it should work. If it does injustice to any interest, Congress will have to undo it, if it is the desire of that body that justice be done. The court could have said the statute, in the language used, means nothing, and thereby put the burden of using language of direct and accepted meaning to accomplish what the Food and Drug officials said Congress meant to say.

In other words, the Supreme Court, by means of Justice Hughes' reasoning, made good on the stuttering and uncertain language of the lawmakers. It may be criticised on the ground that that is not the function of the Supreme Court, although a rule for construing a statute is that all its parts must be made to work. That is to say, it must be assumed the lawmakers intended to say something, and it is the duty of the court to translate its stutterings into understandable language.

Under the decision anything poisonous or deleterious that may be in a proprietary food is held to be an "added ingredient," even if the compound, without that ingredient, would not be what the buyer would expect to find in it. To arrive at that definition of the words "added ingredient," Justice Hughes had to assume that a mixture of melted sugar and water constituted the basic mixture in coca cola. Only then could he come to the conclusion that caffeine was an "added ingredient." He said the testimony showed the

caffeine to have been introduced into the compound on the second or third melting of the sugar and water.

On the big underlying question as to whether caffeine, in the quantity in which it is found in the coca cola, is a poisonous or deleterious substance, or whether there is anything derived from coca leaves in the beverage, the decision throws no light. That question or questions, the court said, are for the determination of the jury, in case the government again undertakes to prosecute the Coca Cola Company on a charge of adulteration and misbranding. It is known the government is no more prepared right at this time to put in anything more on the caffeine question than it was at the time of the trial at Chattanooga.

As to whether the government will be able to prove that caffeine is deleterious to health there is nothing to enable anyone to give even an estimate. The government, when the case was tried, introduced testimony showing that it is. The Coca Cola Company, by volume at least, if not by quality, proved that caffeine is not a deleterious or a habit-forming drug. The government claimed there is no part of the coca leaves in the beverage, so the question as to whether the drink is harmful by reason of the presence of coca was not presented.

The Supreme Court is of the opinion that the name of the beverage is "descriptive" of its ingredients and does not serve as an appellation to "distinguish" it from any other drink that might be made up in which some of the properties of coca and cola were constituent elements. The court went so far as to say that the name had not obtained a secondary meaning as the designation of a compound from which either coca or cola ingredients were known to be absent. The court said the words "soda water," for instance, are recognized as having acquired a secondary meaning so that no one imagines there is any soda in the carbonated water sold under that name. Such, however, is not the fact, in the estimation of the court in respect of coca cola. It is the view of that body that the name of the beverage conveys the impression to those who know about coca and cola, that it contains some of the properties of both.

If that name is to be retained, officials of the Department of Agriculture who are charged with the duty of enforcing the food law believe, the manufacturers of the beverage will have to put into it some of the properties of coca and cola. Otherwise the name would not comply with the provisions of the law.

The government said the drink was both adulterated and misbranded. In his opinion, Justice Hughes said the questions in respect to the charge of adulteration are, first, whether the caffeine in the article is an added ingredient within the meaning of the Food and Drugs Act, and, if so, second, whether it was a poisonous or deleterious ingredient which might render the article injurious to health.

The lower court decided that caffeine was not "an added ingredient," therefore the case was dismissed. Because it was not an added ingredient, the lower court argued, the part of the law pertaining to poisonous or deleterious ingredients, could not apply to it. The Supreme Court came to the opposite conclusion, namely, that it was an added ingredient, although Justice Hughes said that incongruities would follow from any definition of the word "added."

"But we cannot conclude," says the opinion, "that it was the intention of Congress to afford immunity by the simple choice of a formula and a name. It does not seem to us to be a reasonable construction that in the case of 'proprietary foods' manufactured under secret formulas Congress was simply concerned with additions to what such formulas might embrace. Undoubtedly, it was not desired needlessly to embarrass manufacturers of proprietary foods sold under distinctive names, but it was not the purpose of the act to protect articles of this sort regardless of their character."

To enable justice to make the law apply to all manner of

food, drink and drugs, he said that the term adulteration was used in a special sense. "For example," he said, "the product of a diseased animal may not be adulterated in the ordinary or strict meaning of the word, but by reason of its being that product, the article is adulterated within the meaning of the act."

"The statute with respect to 'adulteration' and 'misbranding' has its own glossary." As before observed, Congress when it passed this act, made up a dictionary of its own, and assigned meanings to words which have not theretofore been attached to them. "We cannot, therefore, assume that simply because a prepared food has its formula and distinctive name, it is not, as such, 'adulterated.' In the case of confectionery, it is claimed that the article made may be 'adulterated,' although it is made in strict accordance with some formula and bears a fanciful trade name if in fact it contains an 'ingredient deleterious or detrimental to health, or any vinous, malt or spirituous liquor or compound or narcotic drug.' And the context clearly indicates that with respect to articles of food the ordinary meaning of adulteration cannot be regarded as controlling."

The proprietary foods, therefore, according to the opinion, are within the purview of the act. Immunity from the provisions of the act are conditioned upon the fact that such foods 'contained no unwholesome added ingredient.' Thus the statute contemplates that mixtures or compounds having trade formulas, and bearing distinctive names, may, nevertheless, contain 'added ingredients' which are poisonous or deleterious and may make the article injurious."

The opinion says that Congress recognized the fact that nature places elements in foods which when taken out and used in concentrated form, become positively poisonous. It was not intended that the law should interfere with foods that contained these poisonous elements in the formula made up by nature. It was intended to apply, however, to compounds in which these poisonous elements might be used as one of the ingredients.

Caffeine, the opinion says, is added to the sugar and water, which formed the basic sirup, in the second or third melting of the mixture. Therefore, said Justice Hughes, the court could not escape from the conclusion that caffeine is an "added ingredient" within the meaning of the Food and Drugs Act.

Upon the remaining question, whether the caffeine, so introduced into the basic mixture of water and sugar, was a poisonous or deleterious ingredient which might render the article injurious to health, there was a decided conflict of competent evidence, says the opinion. The government's experts gave testimony, to the effect that it was, and the defendant introduced evidence to the contrary. Justice Hughes said that question was plainly one of fact which should have been, but was not, submitted to the jury.

As to the misbranding part of the case, the opinion is pointed in its conclusion that the two words constituting the name of the drink convey the impression that the article contains the properties of coca and cola. Commenting upon the contention that the two taken together did not constitute the distinctive name of some other substance, Justice Hughes said the contention leads far. He illustrated that point by saying that a combination of the words, chocolate and vanilla, though it had never previously been used, would nevertheless convey the impression that both chocolate and vanilla were to be found in the article.

"In the present case, we are of the opinion," says Justice Hughes, "that it could not be said as a matter of law that the name was not primarily descriptive of a compound of coca and cola ingredients, as charged. Nor is there basis for the conclusion that the designation had obtained a secondary meaning as the name of a compound from which either coca or cola ingredients were known to be absent; the defendant has always insisted, and now insists, that its product contains both."

Poor Pickings for Calumet Indian in Utah

IF the makers of albumen baking powder—particularly the Calumet Baking Powder company—imagine that the action of the Utah State Food Bureau in amending its regulations so as to admit powder containing albumen to the state was intended to indorse albumen, those makers have been badly mistaken and before this, have been undeceived. It may have been that the Calumet company officials thought the passing of Willard Hansen as state food commissioner meant an indorsement of albumen powders, for Hansen had always been one of their bitterest opponents. But it didn't. Heber C. Smith, present state commissioner, though he said little for the first few months of his administration, has now come out strongly against the water glass comparative test. What is more, in a bulletin to the public, indorsed unanimously by the State Food Bureau, Smith has declared that albumen is not the least benefit to baking powder and that the fraudulent tests and demonstrations must cease. This public statement also requests housewives to report any comparative tests.

Bulletin No. 21, the regulation forbidding the sale of baking powder containing albumen in Utah, was amended last May so that this baking powder might be sold. However, readers of the American Food Journal may remember the amended bulletin prohibited the fraudulent water glass test for making comparisons.

The passage of that bulletin as amended provoked no particular storm at the time except that it caused a bit of criticism of the state food officials from both sides. It appears that both the albumen and non-albumen interests, in the first reading, thought the others had the best of it. However, matters did not develop until a couple of months ago when the Calumet company entered the state in a strong campaign for business.

The opening guns of this campaign were in the form of announcements in the daily papers that the representatives

would make a house-to-house canvass and demonstrate the "superior" qualities of their powder. That looked like a renewal of the old fraud—it seemed to the food officials as if the Calumet company might be trying to put on more of their illegal comparative tests—might try to prove with water and a glass that the albumen powders were superior to the others.

Of course the activities of the Calumet people precipitated activity on the part of the K. C. company and the Royal company and the newspapers began to be flooded with advertising copy showing the relative merits of each. The K. C. company, in particular, makers of a non-albumen powder, published large display ads. headed "Maybe you were one who was fooled," and declared that albumen in powder does not make a better leavener. The battle was a merry one.

Reports began to come into the state food department headquarters that the forbidden water-glass test was being used by the Calumet demonstrators. A special meeting was called last month and Sales Manager Bell of the Calumet company was ordered to appear before the bureau.

Bell, armed with his water glass and his albumenized powder, came and saw but he did not conquer. His would-be demonstration of the value of egg albumen went down to complete defeat before the grueling questions of bureau members and the sharp common sense of Herman Harms, state chemist.

Bell attempted to prove that he could demonstrate the "speed of action" of baking powders by use of the water-glass test. Harms took exception to this statement.

"The water-glass test shows nothing; let us see what the difference is in real dough," suggested the chemist.

There were samples of three baking powders on the tables—Royal, K. C. and Calumet, the latter being the only one containing white of egg. Quantities of dough were made and measured so as to be exactly even. Different powder was

placed in each. The test showed not the slightest observable difference in the speed of action.

Bell and his test were discredited and the bureau members united in declaring the albumen to have no value whatever.

At the last meeting of the State Food Bureau, held on May 17, the bureau formally issued its warning to the public and authorized its publication in the local newspapers.

After reciting that the department daily receives inquiries as to what ingredients in baking powders are harmful and that the department has no interest in reasonable claims made by rival manufacturers, the public statement had this to say about fraudulent tests:

"This bureau considers that egg albumen is used in baking powders principally for advertising purposes, and therein lies the possibilities of deception through certain tests. * * *

"This test or demonstration consists of placing a small amount of baking powder containing albumen in a glass and likewise the same amount of the competitive baking powder in another glass. Water is added to each and, by stirring, the albumenized powder will rise much higher than the competitive article. If the housewife permits this demonstration in her home she may be deceived into the belief that the baking powder containing a small amount of albumen is much stronger in gas than the baking powder she may have in her home, when, in fact, such a demonstration does not show the relative strength.

"The State Dairy and Food Bureau considers this comparative test or demonstration false and fraudulent * * *"
After which Bulletin No. 21, as amended, is quoted in full. The statement then concludes as follows:

"The effect of modern legislation is to compel the manufacture and sale of pure food, as well as to protect the public from fraudulent or dishonest advertising. The presence of a minute quantity of albumen in baking powder does not improve or harm the powder, in the judgment of this board, and is permitted to be used, but false demonstrations as to its purported virtues must cease, and the housewife will confer a favor on the bureau and on the public in reporting to the State Dairy and Food Department the circumstances and details of any demonstration or test of a comparative nature for strength. We wish also to assure the housewife that the tests which may be made relative to the residue in baking powder are tests for sale purposes only, and she has no need for anxiety, because the small amount of baking powder that is ordinarily used in the mix leaves an infinitesimal amount of residue in the cooking.

"The situation regarding baking powder as it exists in Utah, and the agitation resulting from advertisements and demonstrations by baking powder companies makes it imperative, in the opinion of the State Dairy and Food Bureau, to issue this statement."

Notes from Field of Food Control

THE Illinois State Food Standard Commission announces hearings for Wednesday, Thursday and Friday, June 21, 22 and 23, 1916, at the office of the commission, 1627 Manhattan building, promptly at 10 a. m., on corn sirup (glucose) and its use in foods.

All interested are invited to be present.

The first day, Wednesday, June 21, will be confined to the scientific testimony as to the wholesomeness of the product.

Second day, Thursday, June 22, the discussion will be confined to manufacturers or distributors.

Third day, Friday, June 23, the discussion will be confined to the trade and consumers.

Each group will be requested to take part in the discussion on the day assigned to them, but they are invited to be present on the other days.

W. SCOTT MATTHEWS,
DR. WALTER S. HAINES,
THOMAS P. SULLIVAN.

On the evening of Friday, May 19, the Chicago section of the American Chemical Society gave a dinner at the Hotel Sherman on the occasion of the presentation of the Willard Gibbs Medal to Willis R. Whitney. The event was well attended.

The Dawson Springs Mineral Water Company was charged with violating the pure food and drugs law in an information filed recently in the Louisville, Ky., Federal Court by Perry B. Miller, United States District Attorney.

State Dairy and Food Commissioner James Foust of Pennsylvania has been appointed by President W. B. Barney of the American Association of Dairy, Food and Drug Officials, a member of the executive committee of that organization, vice R. M. Allen of Kentucky, resigned.

EXTRACT MANUFACTURERS TO MEET.

The annual convention of the Flavoring Extract Manufacturers' Association of the United States will be held June 28, 29 and 30 at the Marlborough-Blenheim, Atlantic City, N. J.

It is expected that this will be one of the most successful conventions which this influential association has ever held.

CACAO PRODUCTS STANDARDS.

The following definitions and standards for cacao products were adopted by the Joint Committee on Definitions and Standards June 4, 1915, and were approved by the Association of American Dairy, Food and Drug Officials August 3, 1915, and by the Association of Official Agricultural Chemists November 17, 1915:

Cacao beans, cocoa beans, are the seeds of the cacao tree, *Theobroma cacao* L.

Cacao nibs, cocoa nibs, cracked cocoa, is the roasted, broken cacao bean freed from its shell or husk.

Chocolate, plain chocolate, bitter chocolate, chocolate liquor, chocolate paste, bitter chocolate coatings, is the solid or plastic mass obtained by grinding cacao nibs without the removal of fat or other constituents except the germ.

Chocolate, plain chocolate, bitter chocolate, chocolate liquor, chocolate paste, bitter chocolate coatings, contains not more than three per cent (3%) of ash insoluble in water, three and fifty one hundredths per cent (3.50%) of crude fiber, nine per cent (9%) of cacao starch, and not less than forty-five per cent (45%) of cacao fat.

Sweet chocolate, sweet chocolate coatings, is chocolate mixed with sugar (sucrose), with or without the addition of cocoa butter, spices or other flavoring materials.

Sweet chocolate, sweet chocolate coatings, contains in the sugar and fat-free residue no higher percentage of ash, fiber or starch than is found in the sugar and fat-free residue of chocolate.

Cocoa, powdered cocoa, is cacao nibs, with or without the germ, deprived of a portion of its fat and finely pulverized.

Cocoa, powdered cocoa, contains percentages of ash, crude fiber and starch corresponding to those in chocolate after correction for fat removed.

Sweet cocoa, sweetened cocoa, is cocoa mixed with not more than sixty per cent (60%) of sugar (sucrose).

Sweet cocoa, sweetened cocoa, contains in the sugar and fat-free residue no higher percentage of ash, crude fiber or starch than is found in the sugar and fat-free residue of chocolate.

Milk chocolate, milk cocoa, sweet milk chocolate or sweet milk cocoa, respectively, is chocolate, cocoa, sweet chocolate or sweet cocoa which contains not less than twelve per cent (12%) of whole milk solids in the finished product.

The foregoing definitions and standards are adopted as a

guide for the officials of this department in enforcing the Food and Drugs Act.

USE OF GUARANTY LEGENDS.

It has been made to appear that (1) dealers in food and drugs have on hand a great many labels and containers printed or marked prior to the date of Food Inspection Decision 153 (May 5, 1914); (2) these labels and containers bear the legend "Guaranteed by (name of guarantor) under the Food and Drugs Act, June 30, 1906," or a serial number issued by the United States Department of Agriculture, or both; (3) these labels and containers, when so printed or marked, complied with the rules and regulations for the enforcement of the Food and Drugs Act in effect at the time; and (4) great financial loss will result to such dealers, through their inability to use these labels and containers, if Regulation 9, as amended by Food Inspection Decisions 153 and 155, be enforced beginning on May 1, 1916.

Accordingly, proceedings under the Food and Drugs Act, based on the shipment in interstate or foreign commerce, or the sale in the District of Columbia or the Territories, prior to May 1, 1918, of any article of food or drugs, will not be instituted solely on account of the fact that the label thereon or the container thereof bears the legend "Guaranteed by (name of guarantor) under the Food and Drugs Act, June 30, 1906," or a serial number issued by the United States Department of Agriculture, or both, upon it being established that such label or container was so printed or marked prior to May 5, 1914.

PRODUCTS FROM CHERRY PITS.

Sixteen hundred tons of cherry pits, now a source of annoyance and expense to canneries, can be made to yield two valuable oils and also a meal for feeding cattle, according to specialists of the U. S. Department of Agriculture. In addition 105,000 gallons of cherry juice now wasted in seeding cherries can be turned into desirable jelly and sirup, or even into alcohol. A saving of these valuable by-products from cherry canning may make possible the domestic manufacture of substitutes for almond oil and bitter almond oil, now imported, and at the same time establish a new industry in the cherry packing districts of the North Atlantic, North Central and Western States.

The specialists, however, have not yet carried their work to a point where they can say that the converting of this juice and the cherry pits would be a profitable side industry for the ordinary or smaller cannery. In cases where a number of canners are operating within a reasonable distance of one another, the specialists, however, believe that the waste products could be sent to a central co-operative or other plant at small cost and there utilized to advantage. Studies, however, are being carried on to determine whether means can not be devised for making these waste products profitable also when handled on a small scale.

A PUBLIC HEARING ON MILK.

The hearings to determine what standards shall be observed in milk and milk products will be resumed in Chicago June 13 and 14 at the Hotel Sherman. Recently the government food officials heard the views of manufacturers in New York City. A bulletin issued by the Department of Agriculture says:

A public hearing on definitions and standards for milk, cream, condensed milk and other milk products will be held in Chicago on June 13 and 14, 1916, by the Joint Committee on Definitions and Standards representing the U. S. Department of Agriculture, the Association of Official Agricultural Chemists, and the Association of American Dairy, Food and Drug Officials. All persons interested are invited to attend. Those who desire may present their views in writing to the Secretary to the Committee, Bureau of Chemistry Building, Washington, D. C., on or before the dates set for the hearing. Ice cream and butter will not be considered at this hearing.

The representatives of the committee desire to obtain from the trade and others definite and accurate information concerning the composition, standards, grades, and descriptive terms or names of the various milk products on the American market so that appropriate definitions and standards may be

determined and presented to the three associations for approval. Subjects will be discussed in the following order: June 13, Definitions, Standards and Grades of Milk and Cream; June 14, Sweetened Condensed Milk, Condensed Skimmed Milk, Sweetened Condensed Skimmed Milk, Dried Milk, Dried Skimmed Milk, Dried Cream, Homogenized and Pasteurized Milk Products, and Cheese. The hearings will be held at 10 a. m. on June 13 and 14, 1916, in the Hotel Sherman, Randolph and Clark streets, Chicago, Ill.

COLORS IN FOOD.

Food Inspection Decision 76 is hereby amended by striking out of the list of permitted dyes contained therein, the words:

Yellow shade:

4. Naphthol yellow S.

and substituting therefor the words:

Yellow shades:

4. Naphthol yellow S.

94. Tartrazine.

Food Inspection Decisions 117 and 129 are also amended so that, hereafter, the coal-tar dyes which may be used in food, subject to the provisions of Food Inspection Decisions 76, 117 and 129, shall be the following:

Red shades:

107. Amaranth.

56. Ponceau 3 R.

517. Erythrosine.

Orange shade:

85. Orange I.

Yellow shades:

4 Naphthol yellow S.

94. Tartrazine.

Green shade:

435. Light green S. F. yellowish.

Blue shade:

692. Indigo disulfoacid.

W. G. McADOO, *Secretary of the Treasury.*

D. F. HOUSTON, *Secretary of Agriculture.*

WILLIAM C. REDFIELD, *Secretary of Commerce.*

FOREIGN TRADE INVESTIGATIONS

The most extensive investigations into foreign-market conditions ever undertaken at one time by the Bureau of Foreign and Domestic Commerce, Department of Commerce, will be under way soon after the beginning of the new fiscal year in July. These investigations will be aimed at the newer and more undeveloped markets lying well outside of the fighting zone, especially those of South America, China, India, Africa, and Australia. Twelve different lines are to be investigated and fifteen distinct examinations to find suitable agents for the work have been announced for some time in May.

For South America, agents are being sought to study and report on markets for construction material and machinery, fancy groceries, furniture, glass and glassware, jewelry and silverware, motor vehicles, paper and printing supplies, railway supplies, and stationery and office supplies. In the Far East, Africa, and Australia a study will be made of the markets for boots and shoes, electrical goods, motor vehicles, and railway supplies. One agent is also sought to look into possibilities for American commercial and industrial investments in South America and another to make a similar study in the Far East.

GOVERNMENT SCANS JOBBERS.

The Federal grand jury recently began an investigation at Des Moines, Iowa, to ascertain whether the Nebraska-Iowa Wholesale Grocers' Association is operating in violation of the Sherman anti-trust law.

The Department of Justice has been at work on the case for three years. It is alleged by critics of the organization that it restricts the direct distribution of food and that jobbers outside the Association cannot buy as cheaply as those within it.

Sixty-five witnesses from various sections of the country will testify, and the evidence will be submitted to the Attorney General of the United States.

Fifty-six jobbers are affiliated with the organization.

The witnesses who were present were E. J. Perdue of the Chicago branch of the Nebraska and Iowa Mercantile Company; George G. Randall of the Northern Jobbing Company, Chicago; C. C. Daehler of the Omaha branch of the Nebraska and Iowa Mercantile Company; J. L. Walker of the Tri-City Mercantile Company of Davenport, and John C. Petty of the Central Grocery Company of Des Moines.

HELME AFTER HOT DOGS.

State Dairy and Food Commissioner Helme is sending letters to all "hot dog" manufacturers in Michigan warning them to beware of violating the law against "doctring" their product.

According to Helme, while the dye market is booming because of the European war, there is a coal tar derivative which is being used by Michigan weinerwurst, sausage and bologna manufacturers which so changes the color of the skin or casing that the average housewife thinks it is fresh, regardless of its actual pedigree.

"The coal tar dye makes an especially good job of a wiener," says Helme. "Take the oldest and toughest wiener you can find, dress him up in a skin which has been properly treated with coal tar dye and he will look so fresh and appetizing that you even want to bite into him raw. Ordinary sausage and bologna also can be greatly beautified with the dye.

"Now to the housewife let me say this: If one of these days your butcher sends you wieners that do not look anything like the ones you have been getting, do not get scared. The stuff is all right; he has just gotten my letter and has quit using the dye."

The decision of the Supreme Court several weeks ago sustaining a conviction under the sausage act of 1913 placed a powerful weapon in the hands of the Dairy and Food Department for the precaution of those selling sausage with either coal tar dyes, boric acid, borax, sulphites, sulphur dioxide, sulphurous acid or any other foreign substance deleterious to health.

LEWIS GETS TWO YEARS.

Lloyd C. Lewis, indicted by the Federal grand jury on a charge of manufacturing illegal oleo, pleaded guilty to the charge in Judge Dyer's Court, St. Louis, Mo., recently, and was sentenced to two years in prison at Fort Leavenworth. Lloyd H. White, his brother-in-law, also pleaded guilty and was fined \$1,000.

Mrs. Cora Lewis, wife of Lloyd Lewis, and Marvin Warden, arrested in the same raid, and also under indictment, were granted a separate trial and their cases continued. Lewis operated a creamery at 2003 East Grand avenue.

INJUNCTION IN CREAM OF WHEAT SUIT.

The campaign of the Cream of Wheat Company to purge the trade of southern California of substitutes for its product has not been checked by the determination of H. G. Chaffee, the big chain store manager of Los Angeles. On the contrary, despite Chaffee's assurances that he did not sell his product deceptively as "Cream of Wheat," the Minneapolis concern has succeeded in securing an injunction against him restraining him

from in any manner whatsoever handling, advertising or selling cereal breakfast foods not selected, prepared or put up by the plaintiff herein under the name "Cream of Wheat," or under any other colorable imitation or simulation of plaintiff's trade mark or trade name "Cream of Wheat," and from fraudulently using plaintiff's said trade mark or trade name or any simulation or imitation thereof in the sale of breakfast foods, or from violating or infringing the equitable rights of plaintiff in the premises in said bill of complaint complained of and set forth, and from selling bulk middlings or any other product not produced by plaintiff as or when "Cream of Wheat" is called for or ordered.

Affidavits by H. G. Chaffee and A. L. Hadley, president and manager, respectively, of the defendant company, were presented asserting that at no time in the history of the organization had clerks been instructed or permitted to substitute middlings willfully for Cream of Wheat. Both affidavits show

that at monthly meetings of managers the matter of substitution had often been discussed, and always instructions had been given never to let a customer go away from the store believing she was getting one product when in fact it was another.

The instances cited by the Cream of Wheat Company where detectives had asked for Cream of Wheat at Chaffee stores and had received middlings, Germea and Primrose wheat, were declared to be merely errors or disobedience on the part of employes. The claim was further put forth that many times customers who call for Cream of Wheat really did not want the Cream of Wheat made by the Minneapolis company, but in fact want and expect to get middlings.

The issuance of this temporary injunction does not mean that the case is ended. H. G. Chaffee said: "We will contest this matter energetically, and the issuance of this temporary injunction will not deter us in the least. We believe that when the case comes for complete hearing our contentions will be upheld."

It probably will be many months before the case comes to trial as the Federal courts are badly congested.

DUTY ON OLIVES.

The Board of United States General Appraisers has overruled the protests of John Magee & Co. and the Inter-City Brokerage Company of New York City against Collector Malone's assessment on stuffed olives at 15 cents per gallon, under paragraph 218 of the 1913 Tariff Act. The importers claimed the goods dutiable under paragraph 217 as edible fruits prepared in any manner, 1 cent per pound, or free of duty.

In upholding the action of the Collector, General Appraiser Waite, who wrote the decision for the board, said:

"The provision for olives in the law of 1913, under which the importations here in question were made, is the same as it was in the law of 1909; that is, it provides for 'olives,' without accompanying description or limitation. We think, therefore, the term is all-inclusive, so far as olives are concerned, and the protests should be decided upon the principle laid down in the soya-bean case (Brown vs. United States, 6 Ct. Cust. Appl., T. D. 35977), where it was held that the provision for 'soya beans' included the soya bean, even though it had been prepared by cooking and putting in jars.

"It is unnecessary to discuss the other claims made in the protests, as we are satisfied that the classification made by the Collector is right. The protests are, therefore, overruled."

TALTY APPOINTED.

The appointment of N. A. Talty of Waterloo, Ia., as city and deputy state milk inspector was confirmed recently by W. B. Barney, state food and dairy commissioner, following a conference with Mayor Law and Dr. O. P. Thompson, deputy state inspector. Inspector Talty was appointed milk and sanitary inspector by the city council but the milk inspectorship was made subject to the approval of the state department.

Mr. Talty will succeed W. W. Wyant as deputy state milk inspector. The latter was reappointed two years ago when the state department refused to approve the appointment of E. J. Springer, named sanitary inspector by the council under former Mayor Thompson's administration.

FIX SAUSAGE REQUIREMENTS.

Hereafter sausage in Utah may not consist of less than 94 per cent sausage meat, 3 per cent water and 3 per cent cereal. The State Food Bureau at its meeting has adopted the United States standard regulation for the manufacture of sausage, head cheese, hamburger steak, and whatnot.

From 2 to 3 per cent so-called "bull meat flour" is permitted. Moisture also is a factor, the manufacturers declaring that adding water facilitates the grinding of sausage.

Sausage not designated as "pork sausage" may contain proportions of beef.

PEA CANNERS NO EXCEPTION.

All possibility of relief for the great pea canning industry of Wisconsin went a-glimmering under Justice Rosenberry's

Supreme Court decision in the case of the State vs. The Lange Canning Company of Eau Claire, Wis. The importance of the decision was not appreciated until the industrial commission's representatives proceeded to interpret the words of the court. For three years, under the 1913 legislative act, the industrial commission under special orders has permitted the eighty-five pea canning companies of Wisconsin to employ women for more than ten hours a day. This was allowed because the commission appreciated the peculiar necessities of the business, the canners having convinced the members that ripe peas must be canned immediately or the crop becomes a serious money loss. Under Judge Rosenberry's opinion the commission cannot grant these special concessions this year, and the pea-canners will be forced to work under a strict ten-hour schedule. The industrial commission, of course, must enforce the strict letter of the law, which will mean prosecutions and heavy penalties if the law is violated.

Another complication which arises under the Rosenberry opinion has to do with several large manufacturing concerns which gives employes a half hour instead of a full hour for noon lunch periods. The commission in several instances has granted this concession when it was proved necessary. It has refused to grant this concession, however, unless the petitioning employer furnished the women with adequate and pleasant eating accommodations. It has also refused this concession unless the great majority of women employes voluntarily signed a petition for the half-hour nooning. Judge Rosenberry's opinion puts an end to this accommodation.

Another result of the opinion is that Wisconsin hereafter will have practically a straight ten-hour day for women, with a fifty-five limit for the week. This is expected to result not only in a resumption of night trading in the cities, but may also result in a revival of the long day during the Christmas season.

STOCK YARDS MILK TABOO.

The practice of foreigners milking cows penned up at the Kansas City stock yards and selling the milk to others or even using it themselves will not be longer tolerated by the city health authorities. Carleton Coon, city food and drug inspector, made the announcement recently and said the Stock Yards Company officials were co-operating with the health authorities.

Mr. Coon made a trip of inspection and about seventy-five gallons of milk were poured on the ground. He warned the men if they did not stop the practice they would be arrested.

NEW ORLEANS MILK REPORT.

The annual report of Dr. I. R. DeBuys, president of the New Orleans Pure Milk Society, just made public, shows that no serious trouble developed with any part of the local milk supply in the last twelve months. Dr. DeBuys reports that under arrangement with the City Board of Health the dairymen report all communicable diseases on their route so that additional care may be taken to guard the city's supply.

Dr. DeBuys states that "during the time diphtheria was prevalent last fall, cultures were taken at frequent intervals of all persons handling our milk or coming in contact with our local dairymen so that any carrier or suspicious cases should be immediately removed from the dairy.

"I have hopes of extending the medical inspection of employes of all commission dairies during the coming year," the report adds.

CHANGES ICE CREAM RULES.

After a conference with the leading manufacturers of ice cream in Louisville and other cities of Kentucky, the State Board of Health has issued a new rule for the frozen product, Dr. W. E. Gary, city dairy expert, was notified yesterday.

The new rule fixes the butter fat standard at 10 per cent, and requires the labeling of containers and the use of placards when ice cream contains artificial coloring matter or artificial fruits. Under the rule that has been superseded, the butter fat standard was 14 per cent, but by the use of labels manufacturers were allowed to turn out a product grading as low as 4 per cent butter fat. From now on it will be unlawful to

offer for sale any ice cream with less than 10 per cent butter fat.

MUST MAKE FULL DELIVERIES.

The failure of crops is no excuse for a canner to neglect to make deliveries under his contracts, according to two recent decrees of the Maryland Circuit Court of Hartford County, right in the midst of the canning season, a fact which makes the finding the more radical. It made no difference in the court's view of the packers' liability that the packer had made every effort to pack the goods by procuring the necessary acreage to be grown for him and by accumulating the supplies and having his house and labor all ready for the canning operations, but by reason of the excessively wet weather prevailing before and during the canning season, his crops were ruined and he was not able to pack the goods he had contracted to sell. This defense was interposed by way of plea to the declaration, but upon demurrer the court held that the facts set up were not available as a defense to the contract. In both cases the jury allowed the plaintiffs money recompense for the breach of the contract.

The contracts offered in evidence in these cases covered sales of No. 3 standard tomatoes, designating the brand of the packer. It was because of this designation that the packer sought to invoke the failure of his crops as a defense to the action, but the court, by sustaining the demurrer and overruling the defense on that ground, refused to recognize the right of the packer to disregard his contract and excuse his failure to make delivery on the ground that he was unable to pack under his label because of the failure of his crops.

In other words, the effect of the court's ruling is to require future contracts to be strictly fulfilled and to take such contracts out of the class into which there is sometimes read the implication that the contract may be avoided if the goods which are the subject of the contract are not at the time of its execution in being and do not thereafter come into being.

Another case of great interest in similar trade circles was that of Strasbaugh, Silver & Co. against Steward Sanitary Can Company recently decided by the Maryland Court of Appeals. In this case Strasbaugh, Silver & Co. purchased, in their own name, sanitary cans for the Wright Canning Company. The Wright Canning Company, after the purchase of the cans for it, sold for future delivery tomatoes to be packed in the cans so purchased. There was delay in making delivery of the cans and the machine for closing them, and also in the operation of the machine after it arrived. Under all the circumstances the Wright Canning Company were not able to fill their future contracts for sanitary tomatoes and were compelled to go upon the market and buy to fill their orders at considerably increased prices.

Strasbaugh, Silver & Co. refused to pay the invoice for the car of cans. Suit was brought against them by the Steward Company to enforce collection and, by way of defense, Strasbaugh, Silver & Co. set up the losses accruing to the Wright Canning Company. At the trial of the case in the Court of Common Pleas of Baltimore City the defendants were not permitted to introduce this evidence, and the Steward Company recovered judgment against them. On appeal the judgment of the lower court was reversed and a new trial awarded.

In its opinion, the Court of Appeals said that under the facts of the case Strasbaugh, Silver & Co. were the agents of the Wright Canning Company, and as such could maintain an action brought in their own name to recover damages sustained by their principal in consequence of the breach of the contract, and, as they could maintain such an action when instituted by themselves, they could in a suit against them brought upon the contract set up as a defense damages suffered by the Wright Canning Company.

State Pure Food Commissioner R. H. Hoffman, Jr., of Texas, recently launched a vigorous pure water campaign, directed against dealers and peddlers in so-called aqua pura or distilled water. Commissioner Hoffman has sent notices to all of his inspectors throughout the state to send at once samples of this water, which will be subjected to a bacteriological examination to determine whether or not it is pure. The campaign will also be extended to mineral waters.

Sweeping Meat Food Products Decision Rendered by United States Circuit Court of Pennsylvania Against Pittsburg Melting Co.—All Meat Products Not Inspected and Passed, and So Marked, Must Be Denatured

AN IMPORTANT decision, and one which will act as a distinct precedent in cases of this kind, was rendered in the United States Circuit Court of Appeals for the third Pennsylvania Circuit, recently, when the Circuit Court reversed the District Court of the United States for the Western District of Pennsylvania in the case of G. E. Totten, an inspector, versus the Pittsburg Melting Company. The higher court refused to sustain the District Court in its injunction which prohibited the Baltimore & Ohio R. R. Co. and G. E. Totten, the inspector, from interfering with export shipments of the Pittsburg Melting Company.

Judges Buffington, McPherson and Woolley, Circuit Judges, sat on the case.

The opinion, which was read by Judge McPherson, will be of particular interest to readers of this paper and for that reason is given here in full:

The decree of the court below enjoined the Baltimore & Ohio R. R. Co. and G. E. Totten, an inspector in the service of the Department of Agriculture, from interfering with certain export shipments of the Pittsburg Melting Company. A full statement of the controversy will be found in 229 Fed. at page 214. Much that is there said need not be referred to now; in our opinion the decision of the present appeal turns upon a question of fact, and merely requires us to state briefly our conclusions upon that question. In a few preliminary words, the situation is this:

For many years the Melting Company and its predecessors in business have been engaged in rendering, or converting, the fat of animals—chiefly, if not altogether, the fat of cattle, as we understand the evidence—into oil, stearine, tallow, cracklings and grease. Nothing except the oil is now in question; this, in the view of the company, is "tallow oil," while the government describes it as "oleo oil," the substance that is the basic constituent of oleomargarine. At one time the company was engaged in making oleomargarine; about 30 years ago, however, hostile Pennsylvania legislation compelled it to abandon the business, but the fact appears, and is relevant, that the oil now in question is made by the same appliances that the company then used. About 90% of the company's oil is carried to New York over the Baltimore & Ohio Railroad, and is shipped from there to Holland and one or two other European countries. During several years after the Meat Inspection Acts went into effect (34 Stat. 674 and 1260), the plant of the Melting Company was under government inspection, but the inspection was withdrawn in 1909 in consequence of a disagreement that need not now be gone into. In 1910 the company was indicted for a violation of the Act, but was acquitted. As a result of the verdict, the company discontinued a proceeding in equity that was then pending between the same parties and involved substantially the same subject-matter as is now before the court. During the next five years the company shipped its oil abroad as an inedible fat, and was not interfered with by the Department. The tins were labeled "Inedible," and in other respects the regulations of the Department then in force were complied with. But on November

1, 1914, new regulations went into effect, and among them was a requirement that a shipper of meat food products must certify that the product "is not capable of being used as food by man, is suitable only for industrial purposes, is not for food purposes, and is of such character or for such a use that denaturing is impracticable."

This revived the disagreement, and in January, 1915, the company while attempting to ship its oil under the old regulations, was prevented from doing so, until the District Court restrained the defendants by preliminary, and afterwards by final, injunction. The scope of the decree is sufficiently apparent from the opinion in 229 Fed., where it also appears that the vital question in the case is, whether the oil in dispute is, or is not, a meat food product.

By the express language of the Act, no meat food product can be shipped or carried in interstate or foreign commerce unless it has first been "inspected, examined, and marked as 'inspected and passed,' in accordance with the terms of this Act and with the rules and regulations prescribed by the Secretary of Agriculture."

If, therefore, the oil is a meat food product, the statute denied it the right to be carried, for concededly it had neither been inspected nor examined nor officially marked. If it is not a meat food product, it is not included in the Act at all. In considering this question, we remark first, that the substance under inquiry is clearly proved to be "oleo oil." Apparently there is little, if any, chemical difference between tallow oil and oleo oil, but they differ distinctly in methods of manufacture, and in appearance, taste, and smell. As already stated, the plaintiff makes its oil by the same machinery that was formerly used in the manufacture of oleomargarine; moreover, it is made by the process that is appropriate for rendering oleo oil, and not by the process employed for rendering tallow oil; and finally, it exhibits all the characteristics of the former substance. Whatever name one may choose to give it, the evidence leaves us no room to doubt what it really is.

Being oleo oil, therefore, is it a meat food product? It is, of course, a meat product. Is it a food? In its condition as an oil immediately after rendering, it is occasionally eaten as food just as olive oil is eaten, but so rarely that we lay no stress upon that fact; but the evidence shows without contradiction, that for shortening purposes, and as a grease in cooking, it is often used by bakers and householders just as lard is used; and still further, that without being refined or undergoing any chemical change it is the principal ingredient of oleomargarine. In manufacturing this substitute for butter, oleo oil is mechanically mixed by churning with other substances, such as milk, a little butter, salt, neutral lard, or cotton-seed oil. What the oleo oil was before the mixing, it continues to be afterward, and there can be no doubt that the mixture is fit for human consumption and is largely used for food. The oil has probably some industrial uses also, although the evidence is not very clear on this point, but we think there can be no reasonable question that its chief use is to be the base of oleomargarine. Of this substance it constitutes more than

50%. As a food product, we see no essential difference between oleo oil and lard, and it can hardly be questioned that lard is a food. Nor, indeed, do we see any essential difference as a food between olive oil and oleo oil. The former is probably more palatable and is more often used alone, but its chief use is to be mixed with other foods for flavoring purposes. Obviously, the fact that the oleo oil has not been cooked is not decisive. A raw egg is food before as well as after it is mixed with the other ingredients of a salad dressing, and lard is food before as well as after it is mixed with flour and water. Indeed, to our minds the proposition under discussion seems so evident that we find some difficulty in giving reasons to support it. Congress has excluded from interstate and from foreign commerce all uninspected meat food products, and as this was within the legislative power the duty of the court is to enforce the law.

If this conclusion is sound, the other questions considered below and argued here cease to be important. Being a meat food product, the plaintiff's oleo oil could not be carried in interstate or in foreign commerce—in this case, to Holland—without previous inspection, and, as the shipment that gave rise to the dispute has not been inspected, the defendants were justified in the course of conduct they pursued.

As a final word we may add that the Melting Company does not make oleomargarine, and does not knowingly sell oleo oil directly to such manufacturers, either here or abroad; what is done with the oil after it reaches the consignees in other states or in other countries, is a matter beyond the company's control. But, of course, this consideration is not controlling; Congress has chosen to forbid interstate commerce in meat food products unless they have previously been inspected here, and, as we have already pointed out, the question before us now is merely one of legislative power and of statutory construction. We may also say, that the Department's regulations permit shipments of oleo oil after it has been "denatured," i. e., so treated by the addition of some substance (for example, power distillate, a petroleum product) as to prevent its use as a food while leaving its value for industrial purposes practically unimpaired. We refer to these matters to show that they have not been overlooked; they do not affect the course of the argument or the conclusion we have reached.

The decree is reversed with instructions to dismiss the bill.

Patents and Copyrights

The following patents of interest to readers of this journal recently were issued from the United States Patent Office. Copies thereof can be obtained from R. E. Burnham, patent and trade-mark attorney, 882 Bond Building, Washington, D. C., at the rate of 20 cents each. State number of patent and name of inventor when ordering.

1,176,949. Cake-forming device. Herbert W. Eakins, Springfield, Ohio.

1,177,037. Beverage extract. John L. Kellogg, Battle Creek, Mich.

1,177,105. Art of preserving and sterilizing eggs. Samuel F. Henderson, Woodwardville, Md., assignor to The Yester-Laid Egg Co., Baltimore, Md.

1,177,168. Ham and meat press and binding apparatus. John Borbash, New York, N. Y.

1,177,308. Apparatus for cooling and freezing fish and other food substances. Nekolai Dahl, Trondhjem, Norway.

1,177,323. Yeast composition and method of making same. Elias Heller, Los Angeles, Cal.

1,177,345. Process for making bread. Samuel F. McDonald, Memphis, Tenn.

1,177,830. Fruit-washing machine. Alvin Taplin, Minnetonka, Fla.

1,177,832. Method of handling sugar-cane juices. Harold S. Truscott, Makaweli, Hawaii.

1,177,835. Dough-dividing machine. Frank H. Van Houten, Jr., Fishkill-on-the-Hudson, N. Y., assignor to Dutchess Tool Co., same place.

1,177,911. Process of refining hydrogenized fats for producing edible fats. Mose Wilbuschewitsch, Nischninovgorod, Kanavino, Russia.

1,177,982. Process of preserving food products. John M. Young, San Francisco, Cal., assignor to American Can Co., New York, N. Y.

1,178,006. Fruit and vegetable grader. Harvey J. Gehr, Waynesboro, Pa.

1,178,039. Food product and method of preparing the same. Robert Wahl, Chicago, Ill., assignor to Wahl-Henius Research Laboratory, same place.

1,178,040. Dry vegetable food products and process of producing the same. Robert Wahl, Chicago, Ill., assignor to Wahl-Henius Research Laboratory, same place.

1,178,459. Method of preparing grains for the manufacture of flour. Ernst Simons, Cassel, Germany.

1,178,787. Macaroni-drier. Silvio Favro, Pocatello, Idaho.

1,178,794. Process of drying edible pastes. Karl Gammel, Cleveland, Ohio, assignor to The Cleveland Macaroni Co., same place.

1,178,808. Method of treating milk. Joseph M. W. Kitchen, East Orange, N. J.

1,178,969. Fruit-jar closure. Gustav Thaler, Oakland, Cal.

1,179,046. Process of cooking coffee and chicory. Adolph Sherer, New York, N. Y.

1,179,222. Sausage-linking attachment. William T. O. Rule, Hampton, Iowa.

1,179,223. Vegetable-cooking tank. David M. Rush, Buffalo, Mo.

1,179,294. Method of treating dough. Laurence Embrey, county of Stafford, England.

1,179,543. Sausage-linking machine. Oscar G. Mayer, Chicago, Ill.

1,179,877. Food product and process of preparing same (a farinaceous food of the character of bread). Robert & Arnold S. Wahl, Chicago, Ill.

1,179,922. Double-mixing machine. Charles W. Hottmann, Jr., Philadelphia, Pa., assignor to The Hottmann & Juergens Machine Co., same place.

1,180,030. Biscuit-cutting machine. Thomas L. Green, Indianapolis, Ind.

1,180,150. Coffee roasting and grinding machine. Robert Herndon, Houston, Tex.

1,180,160. Process of sterilization and cleansing. Edward E. Lawrence, Cambridge, Mass., assignor to Loose-Wiles Biscuit Co., Kansas City, Mo.

1,169,467. Fruit-assorting machine. Frank W. Cutler, Hood River county, Ore., assignor to Cutler Fruit Grader Co.

1,169,472. Dough-working machine. Laurence Embrey, Fenton, Stoke-upon-Trent, England.

1,169,546. Mechanism for forming filled wafers. Edward E. Lawrence, Cambridge, Mass., assignor to Loose-Wiles Biscuit Co., Kansas City, Mo.

1,169,555. Bake-oven. Behr Manischewitz, late of Cincinnati, Ohio; Jacob U., Joseph and Max Manischewitz, executors and trustees of said Behr Manischewitz, deceased.

1,169,599. Grain conditioning and tempering machine. William S. Barker, Auburn, Ky.

1,169,602. Machine for automatically molding confectionery. Alonzo L. Bausman, Springfield, Mass.

1,169,634. Process for the manufacture of albuminous products from the residues obtained in oil manufacture. Viktor Grafe and Kuno Peche, Vienna, Austria-Hungary.

1,170,026. Machine for cleaning raisins. Inman Tucker, Yuba City, Cal.

1,170,110. Process for the manufacture of yeast from molasses. Gustav Roth, Olmutz, Austria-Hungary.

1,170,162. Manufacture of shredded cereal food. John L. Kellogg, Battle Creek, Mich.

1,170,304. Macaroni-maker. Victor Mancini, Granville, N. Y.

1,170,449. Adjusting mechanism for fruit and nut sizers. John C. Keebler, Bloomington, and Roy L. Sibley, Gardena, Cal., assignors to Curtis Olive Corporation, Bloomington, Cal.

1,170,474. Composition for use in bread-making. David Beatty, Berkeley, Cal., assignor to himself as trustee.

THE WHOLESALE GROCERY FIELD

ALL THE MANUFACTURING AND JOBBING NEWS WORTH PRINTING

CANNED FOODS MARKET.

By Canticle.

General Conditions.—The merry month of May was not so very, very merry, as one might have desired from a canned foods point of view, as the markets in that line were somewhat disappointing to those who expected them to show strong speculative opportunities.

Many articles were found to be scarce and were diligently sought after but the great staples in canned foods were not in urgent enough demand to cause them to advance to any great extent and although the distribution was heavy there was but little buying beyond actual needs.

Canned Tomatoes.—At the beginning of June the price of canned tomatoes is found to be just where it was at the beginning of May, though the price for futures may show a slight advance since that time.

The price of spot tomatoes East is now as follows:

No. 3 standard, f. o. b. Maryland Peninsula.....	\$1.00
No. 3 standard, f. o. b. Baltimore.....	1.00
No. 3 standard, f. o. b. Virginia.....	.95
No. 2 standard, f. o. b. Maryland Peninsula.....	.75
No. 2 standard, f. o. b. Baltimore.....	.77½
No. 2 standard, f. o. b. Virginia.....	.75
No. 10 standard, f. o. b. Maryland Peninsula.....	3.25

For future delivery from the pack of 1916 the price of tomatoes is as follows:

No. 3 standard, f. o. b. Maryland Peninsula.....	\$0.80
No. 3 extra standard, f. o. b. Maryland Peninsula.....	.85
No. 3 standard, f. o. b. Baltimore.....	.85
No. 3 extra standard, f. o. b. Baltimore.....	.87½
No. 3 standard, f. o. b. Virginia.....	.80
No. 3 extra standard, f. o. b. Virginia.....	.85
No. 3 standard, f. o. b. Indiana.....	.87½
No. 3 extra standard, f. o. b. Indiana.....	.90
No. 3 fancy, f. o. b. Indiana.....	1.05
No. 3 fancy, f. o. b. Delaware.....	1.10
No. 2 standard, f. o. b. Maryland Peninsula.....	.60
No. 2 standard, f. o. b. Baltimore.....	.65
No. 2 standard, f. o. b. Virginia.....	.60
No. 2 extra standard, f. o. b. Indiana.....	.70
No. 2 fancy, f. o. b. Indiana.....	.75
No. 10 standard, f. o. b. Maryland.....	2.40

During the month of May it will be seen that there has been no advance in canned tomatoes for immediate shipment, but that the price of canned tomatoes for future delivery has advanced about 2½ cents per dozen.

This advance has been based upon the higher price of corn, cases, labels and labor as compared with last year, and on the farther fact that canners have sold ahead about all the futures in tomatoes that they care to sell. In fact, many Eastern canners and all Indiana canners have practically withdrawn their future prices.

This is a somewhat astounding and disconcerting situation to those opponents of the buying of futures who have been contending that both wholesale and retail grocers had about discontinued the habit of contracting ahead for canned foods.

It is the repetition of the old appeal to human nature and a prospective profit. The wholesale grocers all lined up on the line for their supply of future tomatoes when they remembered that the price last year had advanced from 65 cents

per dozen to one dollar per dozen and that there was not much prospect, owing to higher prices of supplies for a lower price than 60c for No. 2 and 80c for No. 3 during 1916.

Canned Corn.—There is some demand for all grades of canned corn except fancy Maine which seems to be in good supply. Futures are not now attracting any interest, as most buyers are apparently of the opinion that there are no speculative possibilities in future contracts. It has been quite a long time since there has been any important or considerable advance in canned corn. Even in this season when the output has been far below normal the advance in price has hardly been sufficient to counterbalance carrying charges and interest.

Canned Peas.—There is a fair demand for canned peas at prices that owners are unwilling to accept and nothing is therefore doing.

Future business is about all in and over as pea packing will begin about the middle of June and all futures will then be deliverable, and all the 1915 pack will be merged into the 1916 pack.

Canned Salmon.—Distribution in the article is active as the season of greatest demand is now here.

Prices are well maintained by expert demand especially for pinks and the cheaper kinds. The packing of salmon on the Columbia River will soon begin and will be followed by that on Puget Sound, other rivers, and in Alaska. A large output is not anticipated as this is the last year of the fourth year cycle and usually is the smallest. Next year, 1917, will be a big salmon run year in Puget Sound, but it is quite probable that European food requirements will easily sustain prices no matter how large the output may be.

Canned Spinach.—New spring pack of canned spinach is now on the market and available to buyers. Arrivals show good quality. Prices, however, are high and well maintained by the smallness of the spring pack and the total cleanup of the 1915 pack which occurred.

California Fruits.—Prices have sharply advanced from the opening figures owing to the general advance in cans, cases, labels and labor. Canners are also paying more for fruits than last year because producers were unwilling to accept the ruinous prices paid last season and would not gather the fruit and bundle it unless paid better prices. The advance established on 1916 pack has been chiefly on peaches and apricots. Royal Anne cherries are said to be a short crop.

DRIED FRUIT MARKET.

By VERITAS.

The estimates of the coming crop of prunes vary quite a little. In the Santa Clara Valley the estimates vary from forty to seventy million pounds. Ordinarily the Santa Clara Valley produces about one-half of the total tonnage of the prunes of the entire state of California, which would make the estimates of the total crop from 80,000,000 to 140,000,000 pounds. The operators estimating the crop at the maximum quantity are those who sold short. The conservative operators as a general rule are estimating the coming crop from 120,000,000 to 130,000,000 pounds, which is probably about what the crop will produce. If conditions in Europe were normal and the export business was equal to that before the war in Europe, a 120,000,000 pound crop would justify present quotations on future prunes, which are ruling around

5½c basis. There will, of course, be some export business. The amount will have some effect on the market, but a 120,000,000 pounds is more than enough to take care of the requirements of the domestic trade; and should the export business be light, it is doubtful whether or not the present basis of price can be maintained. Spot prunes are cleaning up. The carry-over into the new crop will not be large and will consist of only one or two sizes, and will not have much affect on the coming crop. As a matter of fact, the spot market today is ¼ to ½ cent higher than the future market.

Apricots: The coming crop will be light. Present indications are that a very large proportion of the crop has already been contracted for to be marketed canned or fresh. Recent reports state that the output of dried apricots will not be in excess of 50 per cent of last year's yield, which was about 18,000 tons. The apricot market has already strengthened 2c per pound since prices opened.

Raisins: The Associated Raisin Company has not yet named prices on seedless or seeded. Some business was accepted by the association on seedless at their opening price. This has now been withdrawn and they are accepting business on seeded at the opening price only.

FISH MARKET REPORT.

May is always a poor fish month in this market. There has been, however, some action in Lake Herring and with the movement of the ice from the shores along Lake Superior, the little steamers and small boats have begun to bring in new Flat Lake Herring. They are ruling from \$2.50 to \$2.75 per half barrels, F. O. B., Duluth, according to quality and weight. Receipts have not been heavy to date, and there is a fair demand. Most of these are sold in small kits and pails, which go to the trade, and later on when the harvest season is on the trade is enormous for these small packages.

Indications in the east point to a good catch of mackerel and the fresh fish that have been taken to date have run about half small fish. This would indicate that there are large bodies of fish on the coast this year. In another couple months they will begin to salt this fish, and they will then be offered as salt new mackerel. Prices, however, will probably be high.

The foreign situation is unchanged, and if anything, prices are higher on herring and mackerel since our last report. There is but little action in the item of mackerel, however, at present, although there is always a few barrels exchanging hands.

The new spring Irish mackerel have now arrived in New York and Boston, and opening prices ranging from \$20 to \$22, according to value and quality. These are exceptionally high prices for spring fish, as the quality is always poor and the fish are dark meat.

Norway mackerel are very firm, and but very few laying around in first hands.

June is usually a good herring market, especially for the small white hoop kegs. There are but very few in this market and prices will be high.

There has been quite a spread in the item of 4-KKKK M. & R. herring of late. There are but very few of these goods held in the east and it is the belief of eastern dealers they will be even higher this coming fall than they were last season.

The situation on Norwegian sardines is unchanged, and there are very few to be had, and the few that are here are held at high prices. French and Portuguese sardines are also high.

This year there will be tens of thousands of cases of American sardines of selected quality, packed Norwegian style in pure olive oil, wrapped in parchment paper with nice lithographed label. From first appearance, one would believe these to be the genuine Norwegian goods. The quality is very fine and they will meet with a ready sale, on account of the foreign situation. It is impossible to import any goods that could be sold for a dime to the consumer, and that is the big seller. You can scarcely find a dealer in the middle west who has not already contracted for quantities of these goods. It certainly looks as though the packers on the Maine coast

are going to have their innings this time and it would appear they deserve it.

A little later, herring in tomato sauce and kippered herring will come into this market, which is strictly the product of American industry and enterprise. Prices will be held from \$4 to \$6 a case less than the Norwegian article can be procured at the present time, and the quality in every way equal to the finest of imported Norwegian kippered herring and herring in tomato sauce.

Another item which has met with some favor is the domestic fishballs. It is reported that eastern packers are building up some trade on this item, but to get a really good fish ball one must import them from Norway, where they know how to make them best.—D. H. Lane Co.

HOW UNCLE SAM HELPS BUSINESS.

"I hope that the present prosperity which we are experiencing in the United States will not blind you to the importance of foreign trade," said Dr. Edward Ewing Pratt, Chief of the Bureau of Foreign and Domestic Commerce, in an address before the Business Men's League of St. Louis, Friday, May 26. "We in the United States must not get the idea that foreign trade will come to us without our seeking it, nor must we get the idea that we can afford to devote ourselves exclusively to the increasing amount of domestic business and forget entirely foreign trade."

Dr. Pratt's address was concerned principally with the importance of foreign trade and with the assistance his Bureau is in a position to render to any American who is selling or wants to sell goods in foreign countries. To prove the practical nature of the service rendered to exporters by the Bureau numerous examples of actual results were cited, ranging from a \$1,500 order for road machinery to orders that run into millions of dollars, including textile machinery for the Chinese Government, flour for Turkey, and hydroplanes for Spain. These orders came to the American exporters as a direct result of the activities of the Bureau and its representatives in foreign countries.

"The Bureau of Foreign and Domestic Commerce," said the speaker, "should be judged by its deeds. If we are not accomplishing definite, practical business results it is time the Bureau was discontinued. If, on the other hand, we are accomplishing definite, concrete business results, it is time the work were enlarged and that even greater efforts were made by the Government to promote our trade in foreign countries. Even in the midst of their very great difficulties, the European nations are taking steps to promote their future trade. They recognize, as we must recognize, that the war will be followed by a period of intense international competition. France and Italy especially are making every effort to prepare themselves for this period of economic conflict. We have already, I believe, made a good beginning, but we should leave no stone unturned in preparing ourselves and in equipping the machinery of our Government to encourage and develop trade.

"The practical services rendered American manufacturers and exporters are not confined to the specific trade opportunities, confidential circulars, and so on, that result in the definite orders for goods. We render a great many special services that result more indirectly in increased business. Recently there came to the United States a group of Chinese merchants and dealers. Our commercial agent met them in San Francisco. We had selected him because of his knowledge of China and because he could talk Chinese. He accompanied the commission on its trip through the United States. He was able to put them in touch with American manufacturers and merchants and a large amount of business was consummated as a direct result. Other merchants coming to this country are met at the dock or are invited to our district offices and are given such information as they desire with reference to conditions and manufacturers in the United States. They are placed in touch with the manufacturers who will sell them the things they want to buy and they are sent to the district offices and to the chambers of commerce in the large manufacturing cities in the United States."

Here's Some Interesting Experimental Data

A noted scientist and Director and Experimenter in Psychology in one of our Universities recently performed some elaborate experiments on sixteen students, divided into four squads. In testifying before the court at the famous trial at Chattanooga, won by the Coca-Cola Company, he said in describing his experiments: "The object of my experiment was to determine the effect of caffein alkaloid, in the first place, and in the second place Coca-Cola syrup with and without caffein, on the mental and motor processes." The experiments covered the working hours for a period of thirty-five days and included nine different tests of mental and motor efficiency such as the color-

naming test, the calculation test, typewriting test, etc. The students were kept in ignorance as to whether they were taking caffein (in capsule) or merely a white powder (sugar) or whether they were taking genuine Coca-Cola or Coca-Cola without the caffein. The results of their work were recorded by assistants who were also ignorant of what the students were taking. At the conclusion of the period of thirty-five days the Professor reviewed the reports of their work and drew the conclusion that caffein and genuine Coca-Cola act "in the nature of a lubricant in relation to the nerves and muscles, enabling them to respond more easily to the will."



A Digest

of the authoritative facts and figures relating to the composition and dietetic value of Coca-Cola will be sent on request. You will find it interesting.

THE COCA-COLA COMPANY
ATLANTA, GA.

Program Tenth Annual Meeting National Wholesale Grocers' Association of the United States, Boston, Mass., June 14, 15, 16, 1916—Headquarters Copley-Plaza Hotel

NOTICE TO MEMBERS AND GUESTS: All wholesale grocers and guests in attendance at the tenth annual meeting are requested to register at the Information Bureau, on arrival at convention headquarters, Copley-Plaza Hotel foyer. Entertainment will be provided after business sessions, for which tickets and information may be obtained after you have registered.

WEDNESDAY, JUNE 14, 1916.

11:00 a. m. to 1:00 p. m.—Reception tendered visiting ladies by the New England ladies at the Copley-Plaza Hotel in the grill room.

2:15 p. m.—Entertainment for all guests, including ladies. Boat trip down Boston harbor, viewing North and South Shores. Fish dinner at Palm Garden. Special electric cars leave in front of hotel at 2:15 p. m.

THURSDAY, JUNE 15, 1916.

10:00 a. m.—For the ladies. Automobile tour around historical Boston, visiting Navy Yard and Bunker Hill Monument at Charlestown.

2:30 p. m.—For all guests, including ladies. Automobile trip to historical Cambridge, Lexington and Concord, passing over part of Paul Revere's route.

7:00 p. m.—Annual subscription dinner.

FRIDAY, JUNE 16, 1916.

10:00 a. m.—Only for the ladies. Automobile tour through Back Bay Fens to Wellesley College. Luncheon at Bræ Burn Country Club.

MONDAY, JUNE 12, 1916.

9:30 a. m.—Meeting of Executive Committee, Parlor B.

TUESDAY, JUNE 13, 1916.

9:30 a. m.—Meeting of Board of Directors, state dining room, for consideration of campaign for the work of the Educational and Cost Research Committees.

2:00 p. m.—Meeting of Canners' Conference Committee and Foreign Trade Relations Committee, Parlor B.

4:00 p. m.—Meeting of Economy Conference Committee, Parlor B.

WEDNESDAY, JUNE 14, 1916.

9:30 a. m.—Convention called to order by President Theodore F. Whitmarsh.

Invocation—Bishop John W. Hamilton.

Address of Welcome—Honorable James M. Curley, Mayor of Boston.

Response on Behalf of the Association—Mr. O. J. Moore, fifth vice-president.

Address of Welcome—Honorable Channing H. Cox, speaker of the House of Representatives, Massachusetts.

Response on Behalf of the Association—Mr. W. C. McConaughey, first vice-president.

President's address.

Reports of officers.

Economy Conference Committee—Mr. George E. Lichty, chairman.

Address—John H. Schaefer, president National Association of Retail Grocers.

Address—Mr. Ross W. Weir, president National Coffee Roasters' Association.

Address—Mr. L. V. B. Cameron, president National Association of Brokers in Refined Sugar.

THURSDAY, JUNE 15, 1916.

9:30 a. m.—Convention called to order.

Invocation—Reverend Herbert Swan Wilkinson, D. D.

Arbitration Committee—Mr. W. B. Timms, chairman.

Federal Trade Commission Committee—Mr. O. B. McGlasson, chairman.

Address—Hon. Edward N. Hurley, vice-chairman Federal Trade Commission, Washington, D. C.

Pure Food and Legislative Committee—Mr. Fred R. Drake, chairman.

Address—Dr. Carl L. Alsberg, chief, Bureau of Chemistry, Department of Agriculture, Washington, D. C.

Address—Dr. Louis A. Fischer, chief, Division of Weights and Measures, Bureau of Standards, Washington, D. C.

Chamber of Commerce Committee—Mr. William Judson, chairman.

Address—Mr. John H. Fahey, honorary vice-president, Chamber of Commerce of the United States.

Contracts Committee—Mr. Samuel B. Steele, chairman.

Honest Advertising Committee—Mr. D. C. Shaw, chairman.

Address—Mr. Samuel Hopkinson Adams, editor ad-visor, "New York Tribune."

Canners' Conference Committee—Mr. George B. Wason, chairman.

Address—Mr. Richard Dickinson, president National Canners' Association.

Address—Mr. Frank A. Alpin, president National Canned Foods and Dried Fruit Brokers' Association.

American Specialty Manufacturers' Conference Committee—Mr. Fred R. Drake, chairman.

Address—Mr. Carl A. Lautz, president American Specialty Manufacturers' Association.

Address—Mr. Franklin H. Wentworth, secretary National Fire Prevention Association, on the subject, "The Significance of the Fire Waste."

Better Containers Committee—Mr. C. E. Hanscom, chairman.

7:00 p. m.—Annual subscription dinner.

FRIDAY, JUNE 16, 1916.

9:30 a. m.—Convention called to order.

Invocation—Reverend Edward T. Sullivan, D. D.

Postal Service Committee—Mr. Warren Goddard, chairman.

Bankruptcy Law Committee—Mr. B. D. Crane, chairman.

Foreign Trade Relations Committee—Mr. Arthur P. Williams, chairman.

Address—Dr. E. E. Pratt, chief of Bureau Foreign and Domestic Commerce, Washington, D. C.

Cost Research Committee—Mr. O. J. Moore, chairman.

Address—Dr. Melvin T. Copeland, director Bureau of Business Research, Harvard University.

Educational Committee—Mr. O. C. Mattern, chairman.

Address—Mr. Rollin A. Horr, "Value of an Educational Campaign."

Discount for Cash Committee—Mr. Robert J. Roulston, chairman.

Address—Mr. George E. Lichty, "Why Is It for the Manufacturers' Best Interest?"

Membership Committee—Mr. B. B. Cushman, chairman.

Uniform Tares Committee—Mr. George W. Ferguson, chairman.

Address—Mr. William F. Bode, "Beneficial Results of Uniform Tares."

By-Laws and Constitution Committee—Mr. D. H. Bethard, chairman.

WHY SACCHARIN WON

The Long, Contested Suit of the Monsanto Chemical Works of Saint Louis, Manufacturers of Saccharin, Is Finally Decided in Its Favor.

The Supreme Court of the State of Missouri in handing down its *unanimous* decision that Saccharin is not deleterious to health, and declaring null and void the statute prohibiting its use recognized the principle that the amount used must be considered. This, the Supreme Court of the United States also did in its decision in the famous Bleached Flour case.

An excessive use of anything is harmful, whether it be sugar, salt or water.

SACCHARIN is much more desirable than sugar as a sweetening agent for soft drinks from any view point: (First)—Healthfulness; (Second)—Economy.

In using SACCHARIN the danger from the use of sugar is eliminated, and the infinitesimal amount of SACCHARIN that is required to sweeten cannot possibly be harmful to any one, either adults or children.

Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

Use SACCHARIN to sweeten and do not hesitate to declare its use on the label. **Such declaration stamps your goods as being healthful.**

MONSANTO CHEMICAL WORKS

Manufacturers of Saccharin

ST. LOUIS

Branch: Platt and Pearl Streets, New York



Gleanings from the World of Foods



JOHN SEXTON & CO., Chicago, will at once begin the erection of a mill sprinkled building of extra heavy construction adapted to the wholesale grocery business, including a modernly equipped manufacturing and preserving plant, coffee roasting plant and a large refrigerating plant. The property will be served with a switch track running into the building and extending along about two-thirds of the Illinois street frontage.

Reports from Cleveland indicate that Cleveland has secured the annual convention of the National Cannery Association for February, 1917. The Statler hotel will be convention headquarters.

At the recent annual meeting of the Maryland Wholesale Grocers' Association the following officers were elected: President, Harry C. Grove; treasurer, A. Schauman; secretary, Harry B. Bryan.

The California Central Creameries have been awarded a contract for supplying 700,000 pounds of butter to the United States government. In the entire country but seven distributors bid for the contract.

The Owatonna Canning Co. of Owatonna, Minn., has announced that in the future it will sell its products direct to the retail grocers, cutting out the jobbers altogether. The concern specializes in canned peas, corn, pumpkin and tomatoes.

Secretary George W. Toms of the National Coffee Roasters' Association, has sent out an invitation to the members of that organization to attend a clam bake at the Powham Club, Providence, R. I., June 17. The clam bake was inaugurated last year by the members of the New England and New York branches of the association.

The New York Butter and Egg Exchange, composed of butter and egg merchants in Washington Market, have elected officers. When several jobbers complained they had not been able to obtain membership in the mercantile exchange, the new exchange was suggested. It now comprises 200 members. Harry Dowie was elected president.

The Battle Creek Cereal Coffee Company has been incorporated at Battle Creek, Mich., with a capital stock of \$100,000. The purposes of the company are the manufacture and sale of cereal coffee and other food beverages. The officers of the concern are: J. H. Kellogg, president; O. B. Hague, vice-president, and Wm. E. Goff, secretary and treasurer.

L. C. Norris, who for five years has been sales manager and buyer for the Stetson-Barret Company, wholesale grocers of Los Angeles, has resigned his position to take effect May 1. Mr. Norris came to California five years ago from the Middle West, where he was in the wholesale grocery business, and is regarded as one of the best wholesale grocery executives on the coast.

The value of food packed annually by canners of the United States is approximately \$275,000,000, according to Frank E. Gorrell, secretary of the National Cannery Association, who addressed the closing session of the Indiana Cannery Association at the Claypool hotel recently. The great problem which the canners must meet, Mr. Gorrell said, is the cost of distribution. That cost is about 75 per cent more than the total value of the food, he said, and it is the question of reducing that cost on which he is working. About 150 members of the association visited the Ford Motor Company's assembling plant on East Washington street. The visit to the plant was the last feature of the convention program.

Earl D. Babst, president of the American Sugar Refining Company, says the company is employing about 10,500 men, an increase of about 1,000 over a year ago. Regarding the effect upon his company of the termination of war, he says: "At the moment there is a heavy demand for sugar for export. This demand will doubtless be materially curtailed with the termination of war. I anticipate a continuation of good times for at least another year, whether the European war ends or not in the meantime."

Canned raisins are the newest product to come out of California, a packing house at Armona, Kings county, that state, having demonstrated by experiments this year that the canned article has advantages over raisins packed in cartons, according to coast advices. The principal advantage of canning raisins is said to be that it prevents the raisin from going to sugar and drying out. So successful were the early experiments in this line that the Armona packers have received an order for 12 carloads, to be delivered in Chicago as soon as possible, it is said.

Export rates on fresh meats from Ohio and Mississippi River crossings and related points to Havana, Cuba, may be established by the Atchison, Topeka & Santa Fe and the Gulf, Colorado & Santa Fe railroads without strictly observing the long and short haul clause of the act to regulate commerce, according to an order entered by the Interstate Commerce Commission this week. The commission granted these roads permission to establish rates on fresh meats in refrigerator cars, carloads, from these points of origin to shipside, Key West, Fla., for export to Havana, Cuba, which will equalize the rates obtainable on like traffic through Mobile, Ala.

The New England Association of Manufacturers' Representatives, one of the earliest of the "independent" specialty men's local bodies and also one of the most active, has at last decided to join the American Specialty Manufacturers' Association as an auxiliary. This amalgamation adds strength to the National Association in a section of the country where it was weak, and will also make more efficient the work of the local organization. The consummation of this long discussed union is due to the work of the auxiliary committee, of which B. F. Amos is chairman and D. O. Everhard one of the most active members.

Three Wisconsin sugar factories will be run to capacity this year. The controlling companies are: Wisconsin Sugar Company at Menomonee Falls. The Chippewa Company was recently organized and the following officers have been elected: Max Hottelet, president; Franklin B. Mann, vice-president; John S. Lawson, secretary and treasurer, and directors, Max Hottelet, J. H. Puelicher, J. S. Lawson, F. P. Mann, A. F. Collun, C. B. Whitnall and Emil Rahr.

The second annual outing of the Dahl-Campbell Branch, Washington Court House, Ohio, of the Midland Grocery Company of Ohio, will take place from June 26 to July 1. The entire party will consist of seven special trains of ten Pullmans each and will journey from the starting Point to Washington, D. C., Florida and Atlantic City, under the general direction of W. M. Campbell, vice president of the Midland Grocery Company, and general manager of the Dahl-Campbell Branch. This annual outing has become a firmly established institution in the Ohio retail grocery trade, and is looked forward to each year with pleasurable anticipation on the part of all those who have, in the past, enjoyed the genial hospitality of Billie Campbell. Anyone who is acquainted with the brilliant, charming gentleman from Washington Court House may easily surmise that an all-round good time is in store. The best wishes of the AMERICAN FOOD JOURNAL go with Billie and his seven trains.

TIN and FIBRE CONTAINERS

FOR

Foods, Drugs, Oils

Infinite Variety
Large Capacities
Prompt Deliveries

American Can Company

Chicago New York San Francisco

WITH OFFICES IN ALL LARGE CITIES

RUMFORD

The Wholesome

Baking Powder

A scientific preparation being the result of extended research by the celebrated chemist Prof. E. N. Horsford, for many years Prof. of Chemistry in Harvard University.

Dietetically speaking, Rumford is without fault; as a leavening agent it is perfect; as a keeper it has no superior.

DOES NOT CONTAIN ALUM

Its Purity is Unsurpassed.

BUY PURE COMPRESSED YEAST

The discussion about using starch in Compressed Yeast has reached the point in the United States of a decision forcing those who used it to declare the fact on the wrapper or label.

That is how we administer the Food Laws in this country.

In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

We Do Not Use Starch in Yeast

A. P. CALLAHAN & COMPANY

2407 La Salle Street

Telephone Calumet 410

CHICAGO, ILLINOIS

That cotton bags made in the United States can be produced cheaper than jute bags and will eventually take the place of the jute product in much of the bean and grain trade in this country, is the belief of the J. K. Armsby Company, who are using bags made from American-grown cotton in the southern states for the bean industry in California. The bag seems to meet all strength tests required, and is being perfected so that it will prove just as serviceable for beans and grain as the jute variety.

William Ely, Jr., who resigned on the first of the month from the management of the canned food department of Austin, Nichols & Co., has connected himself with R. C. Williams & Co. in a similar department and will assume his new duties today. Mr. Ely is at present on a vacation and business trip, visiting the Savannah plant of R. C. Williams & Co. Mr. Ely brings to his new duties not only an ample experience in canned food products, but also an excellent reputation from his connection with Clark, Chapin & Bushnell, of which firm he was a partner, before joining Austin, Nichols & Co., after the consolidation.

The W. L. Jones Food Company has bought the tomato products factory, located at Gallipolis, Ohio, formerly owned and operated by the McMechen Preserving Company, Wheeling, W. Va. W. L. Jones Food Company is composed of W. L. Jones and George Haynes. Mr. Jones has had more than twenty years' experience in tomato products, the past ten years with the McMechen Preserving Company as assistant general manager, and ten years preceding that with Flacus Bros., Wheeling, W. Va. George Haynes was twenty-one years with the McMechen Preserving Company.

The McNeil & Higgins Company of Chicago, wholesale grocery concern, has entered into a contract by which the Chicago Dock Company will build for its occupancy a seven-story building in East Grand avenue, 150 feet east of Seneca street, north front, 300 by 100 feet, under a twenty-five year lease at an annual rental of approximately \$34,000, or \$852,000 for the entire term, this being at the rate of a little less than 17 cents a square foot. The building will cost \$300,000. The transaction was negotiated by Ogden, Sheldon & Co. and Bechtel & Adcock. The lessee has been in the wholesale grocery business in Chicago since 1872. The officers include President Malcolm McNeil; vice-president, John McNeil; secretary, Oscar B. McGlasson; directors, Malcolm, John, Marvin, Leo and Gordon McNeil and Robert J. Roulston.

LEE JOINS HILFER FORCES.

John A. Lee, who, until recently, has been a member of the firm of Lee & Henderson, canned food brokers of Chicago, has severed his connection with this firm and will henceforth be connected with the Louis Hilfer Company, which has branches in Chicago, St. Louis, Milwaukee and Indianapolis. Mr. Lee will remain in Chicago, where he will devote his energies to the promotion of the canned foods and dried fruit interests of the Hilfer concern. Mr. Lee has been voted second vice president of the Louis Hilfer Company.

J. B. Henderson will continue the old business under the firm name of J. B. Henderson & Son. Mr. Henderson is one of the best known canned food brokers in Chicago, and has a large number of friends in the trade. His son, who is an energetic junior, and who has large and juicy views on futures, states confidently that he expects to get a stranglehold on corn, tomatoes, peas and other obstreperous fruits and vegetables looking for trouble. Success to all of 'em!

COFFEE ROASTERS' CONVENTION.

The executive committee of the National Coffee Roasters' Association has decided on November 14-17 as the dates for its next annual convention in Atlantic City.

The secretary of the association has issued a formal report of the proceedings at the recent special meeting in Chicago, to take action on the furtherance of a national advertising

campaign, already reported in these columns, in which the following formal votes appear to have been adopted:

Resolved, That we unqualifiedly indorse the recommendations and plan of the Joint Trade Committee in charge of the Pro-Coffee National Advertising Campaign.

Resolved, That a committee of five be appointed by the president to investigate and report the best method to overcome the difficulties encountered by the retail grocer in building up and holding his coffee business.

President Weir appointed as the committee: F. R. Seelye of Sherman Bros. Company, Chicago; C. W. Brand of the Widlar Company, Cleveland; E. G. Beeson of the National Grocer Company, Detroit; S. H. Holstad, Minneapolis, and W. T. Jones, New Orleans Coffee Company, New Orleans.

Resolved, That, subject to approval of and acceptance by the Joint Trade Committee, all firms interested in increasing coffee consumption in the United States be invited to join in the coffee advertising propaganda now being instituted by the allied coffee interests of the United States.

Two applications for membership in the association, of Van Loan & Co. and Koenig & Schuster, both of New York, were presented and they were elected.

CREAM OF WHEAT STRIKES FIGHTER.

The Cream of Wheat Company has succeeded in having the five retail grocers of southern California, whom it charged with fraudulent substitution, enjoined by the Federal Court, but it looks as though there will be a battle royal in the case of H. G. Chaffee, the well-known Pasadena chain store operator. Chaffee denies that he has committed any legal wrong and means to fight the proceedings.

The grocers who consented to an injunction were Royston's, Ernest Gerlemann, Marcus J. Firsich and J. E. McDavid, all of Los Angeles. Walter B. McConkey, a Redlands grocer, did not appear in court or offer any defense, and judgment will be taken against him by default.

Mr. Chaffee has more than once fought in court against price protection plans, notably in the famous Grogan olive oil case, and is enough of a factor to make things lively in the present case. In an interview he is quoted as saying:

"We will not consent to an injunction for the reason that we have not illegally damaged the Cream of Wheat Company and have not violated our legal or moral rights in the sale of middlings. Ever since this business was started our instructions to employes have been for them never to misrepresent; never to deliver one article when the customer believes she is getting another. We have, however, the right to sell the merchandise we have for what it is, and that is what we have done.

"Of course, it is possible for detectives to get almost any kind of evidence they want if they set out to get it, but we believe we can prove that no customer ever has left our store with middlings of farina under the impression that they were actually getting the product of the Cream of Wheat Company of Minneapolis. Neither have we knowingly delivered Primrose Wheat or Germea to a customer under the representation that it is Cream of Wheat."

DENIES UNFAIR BUSINESS.

Denial of the principal charges made in the complaint filed against it by the Federal Trade Commission is contained in the answer of the Shredded Wheat Company of Niagara, N. Y., just filed with the commission. The company points out that its answer is filed out of respect for the federal body, protests against the action and denies the right of the commission to file the complaint or to prejudice the conduct of the Shredded Wheat Company's business. It insists upon its right to have the complaint dismissed and expunged from the records, and calls upon the commission to make such amends as are within its power. It also requests that all the matters in the proceeding before the commission be referred to the Connecticut court, where a case is pending between it and the Ross Food Company.

In the body of its answer the Shredded Wheat Company

In Millions of Homes

There's Only One Spread for Daily Bread

**JELKE
GOOD LUCK
MARGARINE**

is eaten with satisfaction at every meal. Always the same fine flavor—the same delicious taste, the relish and enjoyment there is to a pure, wholesome appetizing food.



Order Your Package Today

Churned by

**JOHN F. JELKE CO.
CHICAGO**

**Illinois Vinegar
Mfg. Company**

19th and Rockwell Streets
CHICAGO, ILL.

**MANUFACTURERS OF HIGH GRADE
DISTILLED VINEGAR**

Canned Salmon

ALL GRADES ALL SIZES

Largest Distributors
in the World

KELLEY-CLARKE CO.

NEW YORK CITY

SEATTLE, WASH.

SPIELMANN BROS. CO.

MANUFACTURERS OF

**CIDERS, VINEGARS &
COMPRESSED YEAST**

MAIN OFFICE

Sheffield and North Aves.
CHICAGO, ILL.

"GOOD-BYE FLY"

According to Department of Agriculture Bulletin No. 118: Apply 0.62 pounds Borax to every 10 cubic feet of manure. Apply Borax particularly around edges; sprinkle with 2 or 3 gallons of water. This treatment should be repeated with each addition of fresh manure. Flies lay their eggs in fresh manure. Borax prevents their hatching.

Don't use more Borax than recommended above.

B. HELLER & CO.

THE PLANT BEHIND OUR PRODUCTS



CHICAGO, U.S.A.

denies that it is or has been or intends to use unfair methods of competition, and says that it has not by any unlawful means hindered or delayed or embarrassed the Ross Food Company in the proper equipment and operation of its plant. It points out to the commission that its contracts with the firm which manufactures its machinery were in effect before the organization of the Ross company, and denies that the company is the only one in the United States capable of manufacturing efficient case-hardened, shredding rolls.

BIG COFFEE DRINKERS.

The great demand for the cheaper grades of Rio coffee to supply the European soldiers the past year has caused the price to advance to a point almost as high as the better grades, according to A. M. Wells, sales manager for the German-American Coffee Company of Omaha.

Even the better grades of Mexican and Central American coffee are becoming difficult to obtain while shipments of Mochas and Javas have practically ceased with poor prospects of securing more for at least a year.

Owing to the fact, however, that Omaha territory demands a very high grade coffee, the local jobbers are equipped to supply the demand for a long time. This condition was realized in time to prepare for the same in most instances.

HEINZ WINS IN ENGLAND.

It is reported, on good authority, that the H. J. Heinz Company of Pittsburgh has purchased 700 feet frontage on the Thames river, London, and will shortly commence the erection of a strictly modern pickling and preserving plant to take care of its rapidly increasing business in Great Britain.

Eighteen years ago the H. J. Heinz Company entered the English market with their line of pickles and condiments. The progress at first was slow and the number of salesmen employed small. In 1890 the traveling force was increased to fifty men, covering the British Isles, all manufacturing, however, being done at Pittsburgh, Pa.

The business, however, became of such magnitude that the company commenced manufacturing in London, taking over the old Batty pickling and preserving business. It took years of hard work to build up a business in the food products bearing the American name among the conservative English people. Today it has become necessary to have larger manufacturing facilities.

FISH INDUSTRY ENORMOUS.

Wisconsin commercial fisheries may not count high in the annals of the industry in the world, but for an inland state it puts up a good front, according to the record for the year 1915, now being compiled by the conservation commission in preparation for its annual report.

The record shows a total of 18,270,771 pounds of all kinds of fish taken and the value is \$728,791.09. Most of the fish were taken in the waters of Lake Michigan and Green Bay, but of the above amount, 2,680,710 pounds, valued at \$57,533.40, were from Lake Superior.

The fish taken are of the following varieties:

Variety—	Pounds.	Value.
Whitefish	164,103	\$ 14,078.34
Lake trout	4,362,208	305,955.40
Bluefin	734,155	15,827.92
Chubs	2,542,481	112,333.91
Herring	7,434,507	113,287.81
Pike	228,710	20,020.52
Bass	14,854	593.49
Pever	2,349,247	69,584.14
Rough fish	2,437,264	76,741.31
Sturgeon	3,242	368.25

Totals 18,270,771 \$728,791.09

Besides the above, there were taken from the Lake Michigan and Green Bay waters \$9,211.83 worth of crawfish, making the total value of \$738,002.95.

The industry furnishes employment to nearly 2,000 men during the fishing season and requires equipment valued at nearly \$1,000,000.

INCORPORATE AT \$150,000.

The Merchants' Wholesale Grocery Company of Louisville, Ky., with a capital stock of \$150,000, divided into 3,000 shares of common and 3,000 shares of preferred stock of a par value of \$25, filed articles of incorporation in the office of the county clerk recently. Authority is vested in the corporation to incur liabilities not to exceed the capital stock. The incorporators are H. K. Cole, C. J. Miller and T. A. Peake, each with three shares of the common stock.

Articles of the Fire Prevention Supply & Sales Company have been filed, with a capital stock of \$5,000, divided into 50 shares of a par value of \$100. The corporation proposes to manufacture and install sprinklers, fire-fighting and fire-extinguishing apparatus of all kinds and is authorized to incur liabilities not to exceed its capital stock. The incorporators are A. H. McAtee, Charles A. Weber and Victor M. Scott, each with three shares of stock.

ST. LOUIS COFFEE IMPORTER DIES.

David Gwynne Evans, 76 years old, for 35 years head of a St. Louis tea and coffee importing business at 504-506 North Second street, died recently from heart disease, in his rooms in the Buckingham hotel. He had been ill for several months.

Evans was a native of Wales and was twice married. His first wife, who died in 1897, was formerly Miss Julia Durkee. They had two sons, Dwight Durkee Evans and Gwynne Evans, the latter well known a dozen years ago as an amateur athlete. His second marriage, in 1906, was to Mrs. Mary O'Reilly, widow of Dr. Thomas O'Reilly, from whom she had inherited a large estate. The gift of a \$5,000 sanctuary rail to the New Cathedral by Mrs. Evans, was announced a few days ago.

RAISIN SITUATION.

Much of the criticism which has been heard in the West Side grocery trade of the New York market for the past fortnight in connection with the confirmation by the California Associated Raisin Co. of orders for "bleached Thompson's" appears to have come from the unprecedented demand for that class of goods. The company asserts that it found itself faced by at least five times enough orders to cover what bleached raisins it expects to have for sale and culling out customers caused some animosity. With four customers turned down to each one accepted, the report spread that the company had not confirmed any orders, though investigations show it to have been untrue.

Bleached raisins have a peculiar demand in certain markets, especially in the East Side trade of this city, a demand ordinarily supplied largely by Smyrna sultanais; but the war has shut off that supply and thrown the whole demand upon the California product. According to the raisin company, it is difficult to estimate how much of this stock is to be had, as it all depends on whether the individual farmers may decide to market their Thompson's fresh or process them into bleached raisins.

C. A. Paulden, the new eastern manager for the Fresno concern, states that the company confirmed orders for Thompson's to the limit of its expectations and possibly beyond and gave the preference to the regular jobbers rather than to speculators or those who had placed orders apparently beyond their real needs. He declares that the company's contracts with the growers do not control their output of bleached goods and that his company has no better control of that line than other packers.

In a letter to this paper, James Madison, president and manager of the raisin company, indignantly denies that his company made its opening prices only to refuse confirmation.

"We announced the price at which we would sell some bleached seedless raisins," he said, "and as orders came in for about five times more than we control, there was naturally a good deal of dissatisfaction, because every packer or every buyer could not get all of his orders filled. Most of them, however, were ordered by speculators, and it is this company's aim to protect the legitimate dealers and not put goods



Convenience, economy, and delicious, wholesome goodness are qualities found in every can of

Veribest
TRADE MARK
FOODS

Cooked—Ready to Serve

Over 100 varieties, including Potted and Deviled Meats, Luncheon Beef, Ox Tongue, Salmon, Sardines, Pork and Beans, etc.

Other Armour Quality Products: Star Ham and Bacon, "Simon Pure" Leaf Lard, Grape Juice, Bouillon Cubes, Devonshire Farm Style Sausage.

ARMOUR AND COMPANY
CHICAGO

The finest preparation of its kind on the market today is **The Great Food Drink**

Malt Marrow

Be sure that you ask for and get **McAVOY'S**.
The only **MALT MARROW** that there is.



McAvoy Malt Marrow Dept.

**2340-8 South Park Avenue
CHICAGO, ILL.**

Tel. All Depts.—CALUMET 5401

E. PRITCHARD

Packer and Manufacturer
of the Finest

"EDDYS"
BRAND

**Canned Foods,
Jellies, Preserves,
Plum Pudding,
Sauces, Table Delicacies,**

and

**PRIDE OF THE FARM
Tomato Catsup**

**Bridgeton, N. J.
and 331 Spring St., New York**

AN IMPORTANT ANNOUNCEMENT

TO THE JOBBER AND RETAILER



The St. James Importing Company, of New York and London, the well-known distributors of Waw Waw Sauce, has been bought by men of strong financial backing who bring to the Company not only ample resources but also the full benefits of many years' experience with one of the largest and most successful manufacturers of food products in the country.

Plans are already laid to place Waw Waw in its deserved position as the King of Table Sauces.

We cannot make Waw Waw Sauce itself any better but we can and will make Waw Waw Sauce a better seller.

An extensive advertising campaign in the leading Journals is now in course of preparation. No pains, expense or effort will be spared to make Waw Waw a leader in easy, steady selling, just as it is now a leader in quality.

Full details of the new plans will be mailed to jobbers and retailers throughout the country. In the meantime the already increasing inflows of orders are being filled promptly from our New York warehouse.

SPECIAL—If you are not fully acquainted with the unusual merit of Waw Waw Sauce, write at once and a full size sample bottle will be sent for trial on your own table.

St. James Importing Company **NEW YORK**

into the hands of the speculators, so that later on dealers would have to pay them a profit.

"For that reason many of the New York orders were turned down, most of those coming from your city being from speculators rather than legitimate wholesale grocers.

"Such untruthful and unfounded reports as have been made about us are in our opinion next to criminal when made against a concern that is trying to sell its goods to the best advantage for the producers, and at the same time to protect the wholesale grocer in his business by keeping the speculator out of the game. The only fear we have at present is that we have sold more than we will possibly have."

And, on the other hand, there is some uncertainty as to what might happen if the war should suddenly end. It is not yet too late for Turkey and Greece to become factors in the raisin and current game next fall, and if they should come in it is hinted that some of the speculative buyers will find that they have bitten off something more like lemons than raisins.

READS LIKE ROMANCE.

An unusual tale of how two men of the same name, but no relation, started in the canning business at about the same time in widely different sections of the country; how both conceived and drafted a trade mark for their product almost identically the same; how business expansion finally brought the two products bearing the same name, same trade mark and same price together in the same store with resultant confusion and difficulty was told Judge Arthur J. Tuttle in United States District Court of Bay City, Mich., recently.

The Fuller Canneries Company of Cleveland, Ohio, was the plaintiff in an action brought against Hart Brothers of Saginaw, in which alleged infringement of copyright was charged. Both canning companies were marketing pork and beans under a trade mark almost the same. The Ohio concern labeled their product "Shepard Brand" and the trade mark was the picture of sheep reclining in a meadow. Hart Brothers marketed their beans under the caption "Shepherd Brand," which, it will be seen, has a slight difference in spelling. The Hart trade mark was illustrated by a picture of a shepherd in the midst of his flock.

After listening to evidence submitted by both sides for the

most part of the day Judge Tuttle handed down a decree in which he declared that the Hart company trade mark was a violation of the Fuller copyright inasmuch as the Fuller company presented a duplicate copyright, while the Saginaw concern had none.

The decree granted the Fuller Canning Company a perpetual injunction, as asked for in the bill of complaint, restraining the Hart Brothers from the use of the words "Shepherd Brand," including the label and picture, upon any of their products. They were also ordered to turn all such labels and trade marks now in their possession over to the court.

The decree declares that the plaintiff is not entitled to damages inasmuch as the court fails to perceive in what way damages have been sustained. The decree orders the defendants to pay the costs of the action, which amounts to \$48.55.

At almost the same time a canner named Shepard was establishing the Shepard Canning Company at South Dayton, N. Y., another man named Shepherd, in Shepherd, Mich., was a heavy stockholder in a canning company then in operation in that village. The Shepherd Canning Company was later sold to the Isabella Canning Company and in 1913 to Hart Brothers of Saginaw. Hart Brothers moved the machinery and books to Saginaw, where they operated the cannery as a side line to their regular produce business. The "Shepherd Brand" pork and beans was being packed when Hart Brothers secured the property, and they saw no reason for changing the label or trade mark.

Meanwhile the Shepard Canning Company of South Dayton, N. Y., was sold to J. D. Fuller & Co. of Cleveland. This concern later reorganized under the name of the Fuller Canneries Company. They named their product after the founder of the concern and had the same copyrighted in the United States patent office at Washington.

Both concerns continued to extend their trade into other states. Hart Brothers pushed their product farther south and the Fuller people farther north, until their zones of operation came in contact with each other. Difficulties immediately arose and the Fuller Canneries Company went to court for redress.



Consular Trade Notes and Brevities



THE constantly increasing price of butter has led the public authorities of France to consider various schemes with a view of remedying the situation. The Minister of the Interior has accordingly authorized the sale of oleomargarine in establishments where butter is ordinarily sold only during the war as a provisional measure. The sales of this product are to be conducted under the conditions provided by the law of April 16, 1897, that oleomargarine shall be delivered only in cubical rolls bearing an impress on one of their faces in clear and indelible characters the word "margarin," also the name and address of the manufacturer. These indications must also be placed on the wrappers, together with the formula showing the composition of the product. Portions of rolls can not be sold.

Returns issued by the Japanese Department of Agriculture and Commerce, as reported in the Japan Gazette, show that the actual crop of rice in Japan last year was 279,571,810 bushels, the first and second estimates having been 285,031,040 and 278,505,125 bushels respectively. The crops during recent years have been as follows, in bushels: 1910, 233,166,896; 1911, 258,562,665; 1912, 251,112,545; 1913, 251,276,335; 1914, 285,031,040; 1915, 279,571,810.

Special efforts are being made at the New York district offices of the Bureau of Foreign and Domestic Commerce, 409 Customhouse, to afford as complete files as possible of the trade publications containing information of value to Ameri-

can business men. Many of the periodicals of this class are already being received, and are made available for the visitors to the district office, especially persons from foreign countries who are interested in trade relations with American manufacturers.

As a result of representations made to the Russian railway authorities by Mr. Henry D. Baker, the American commercial attache at Petrograd, permission has been granted to transport large quantities of licorice root from the Russian Caucasus to Archangel, for shipment to the United States. This will not only be a boon to American tobacco interests, but will also increase the quantity of cargo available for the return trips of vessels carrying the increasing American exports to Russia.

OVER-PAID POSTAGE.

There have been numerous complaints published in Commerce Reports regarding the underpayment of postage on letters from the United States to various foreign countries; but it is unusual to have to report the overpayment of postage and to call the attention of American manufacturers and exporters to the fact that domestic rates of postage in the United States apply not only to the Canal Zone but also to the Republic of Panama. Attention is also called to the custom of some American correspondents to inclose United States postage stamps for replies. These stamps can not be used for this purpose, and are only good for mail leaving the United States.

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CANADIAN SEA FOODS.

The clam-canning season in Maine closed last week with a record figure of 50,000 cases. One factory at Eastport, Me., packed about 20,000 barrels of Canadian clams, or about 60,000 bushels. The average price delivered at the wharf is \$3.45 per bushel.

The live lobsters invoiced at the St. Stephen consulate for shipment to the United States during the first three months of 1916 were valued at \$21,373, or an increase of about 50 per cent over the same period in 1915. The exports of smoked herring for the same period amounted to \$46,125, or about twice the values for the same period in 1915.

PROOF OF ORIGIN FOR EXPORTS.

Judging from some reports that have reached the Bureau of Foreign and Domestic Commerce in regard to trade conditions in New Zealand, it would be highly advisable for American exporters to that country to supply certificates of origin with their shipments. The regulations incident to the enforcement of the "Trading with the enemy act" and the general attitude of the New Zealand public toward goods of enemy origin are apt to give rise to complications, and American exporters should therefore make special effort to prove the American origin of their goods. In the case of Australia, where a similar situation exists, manufacturers' invoices are accepted as proof of origin, and it may be assumed that such documents would be acceptable to the New Zealand authorities.

LESS FISH FROM STAVANGER.

The exports from Stavanger, Norway, to the United States, consisting mainly of canned fish, have fallen off over 50 per cent for the first three months of 1916 in comparison to the same period in 1915. They are also barely one-fourth of the corresponding amount for 1914. In 1914 Stavanger sent \$543,264 worth of merchandise to the United States during the first three months; in 1915 the figure had fallen to \$367,558; and in the present year it is only \$148,034.

The cause of this falling off is the war and the opening up of new markets in Europe by the removal of prohibitive tariff on canned fish. Stavanger's production has been increasing, but the present demand is greater than the supply, and high prices have kept out American buyers.

WILL USE CANADIAN WASTE.

About April 15 the Sanitary Rendering Co., of Lubec, Me., on the American border, will complete its factory, now in course of erection, for extracting oil from herring waste and making dried fish scrap from the residue. The company plans to turn out about 750 barrels of oil and 300 tons of fish scrap this year.

The fish will for the most part be caught near Grand Manan Island, New Brunswick, and will be imported into Lubec after being cured by Canadians. The sale of smoked herring has been one of the chief export activities of the St. Stephen district for many years, and it is hoped that the utilization of the waste will still further increase the value of this trade.

FOREIGN TRADE OF CUBA.

According to the latest statistics published by the Cuban Treasury Department, the trade for the fiscal year ended June 30, 1915, amounted to \$347,579,000, of which \$128,132,000 represented imports and \$219,447,000 exports. Compared with the figures for the preceding year, there was a decline of \$5,876,000 in imports and an increase of \$48,450,000 in exports. Of the imports in 1914-15, \$78,972,000 worth came from the United States, \$14,098,000 worth from England, \$10,227,000 worth from Spain, \$4,240,000 worth from France, \$3,023,000 worth from British India, \$2,428,000 worth from Porto Rico, \$2,219,000 worth from Germany, and \$2,187,000 worth from Norway. The principal countries of destination and the amounts purchased were as follows: United States, \$185,995,000; England, \$24,218,000; Spain, \$2,911,000; Canada, \$1,416,000. The returns show a big decrease in the trade with Germany and notable increases in the trade with the Scandinavian countries and the Netherlands.

SARSAPARILLA IN PORTO RICO.

Sarsaparilla grows practically all over the island of Porto Rico, but for some reason it has not been exploited as an article of export. It is in common use in the country, where "jibaros" peddling it in small bundles are to be seen constantly. It is used for medicinal purposes, brewed in the form of various teas and other decoctions, and also steeped in rum. The supply appears to be fairly plentiful, but there is no organized business of buying and exporting it. A demand for the commodity would help many of the poorer class of country people and add another industry to the list of those built upon the agricultural resources of the land.

The Bureau of Information of the Department of Agriculture, 30 San Francisco street, San Juan, will undertake to get buyers in touch with a supply of the roots. It must be remembered, however, that it is a new thing and will take some little time to get a force gathering as regular work.

SUGAR MILLS TO BE IMPROVED.

For several years past the sugar mills of Porto Rico have had unsatisfactory business, but the rise in the price of sugar incident to the war has put most of the establishments firmly on their feet again. Sugar men and others in position to know expect some money to be spent on improvements this year. Many of the establishments in Porto Rico have antiquated equipment, and are not getting the proper extraction from the cane or the proper amount of sugar from the juice, and will be compelled to improve their machinery in order to keep pace with other establishments which are able to get larger returns. If manufacturers in the United States would look into the market here, the reward would be a considerable amount of business. The crop will be larger than ever before this year, and the sugar people are all optimistic regarding the outlook. This is echoed in general business conditions, of which sugar is a barometer in this country.



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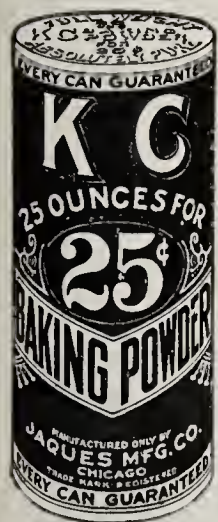
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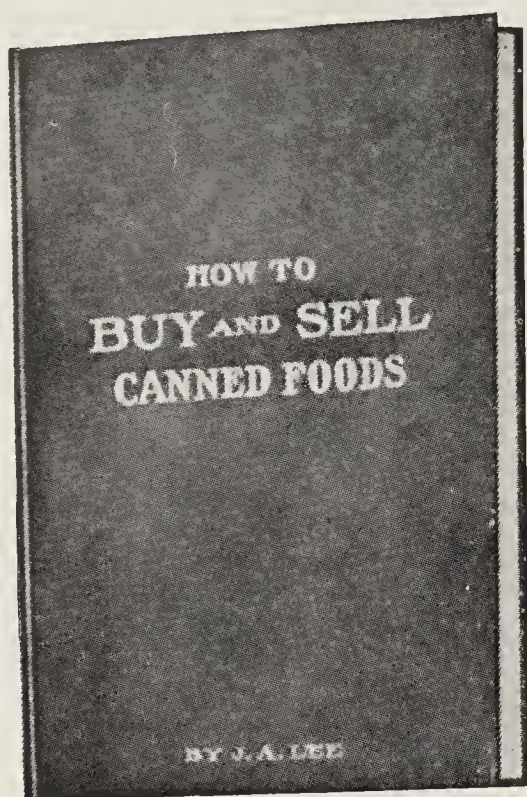
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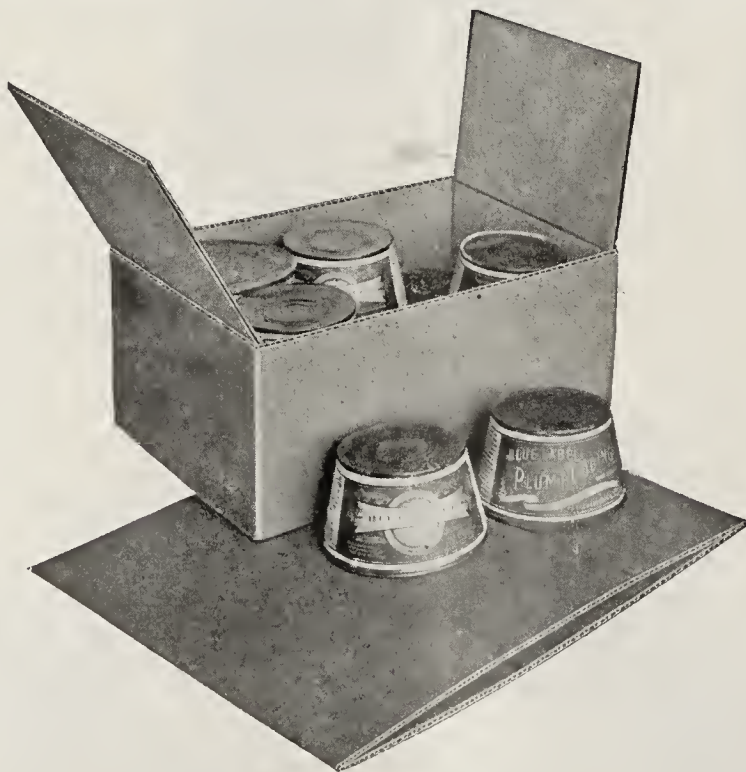
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THE AMERICAN FOOD JOURNAL



VOLUME ELEVEN
NUMBER SEVEN

Chicago, July, 1916

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In This Number

Dairy Food and Drug
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Vol. XI.

JULY, 1916.

Number 7.

Rip Van Winkle Comes to Life

IN THE course of an amusing editorial in the June 13 issue of Chicago Dairy Produce, a somnolent scribe who is content to term himself "the writer," says, in speaking of the front page editorial of the June American Food Journal, which referred to the rubber-heel dairy hearing at Washington on May 4:

"He heads the article, 'Behind Closed Doors,' and tries to convey the idea that the meeting was a secret one. The writer was present at this meeting, and he did not see a single thing to indicate the meeting was a secret one. The doors were wide open at all times, and those in attendance came and went as they saw fit. No one was questioned as to who he was or what his political or religious views were, and there were men there who had never seen either Chiefs Melvin or Rawl and were wholly unknown to either of them. Yet they were never stopped or questioned and had the full benefits and privileges of the meeting."

Verily Rip Van Winkle has been outdone in capacity for sleep. Here is a "writer" who journeys all the way to Washington only to take another of his favorite sleeping potions and consign himself to the arms of Morpheus. And in the dream-laden haze of peaceful slumber his "writer's" brain evolves the cunning little paragraph just quoted.

For the information of our latter-day Rip, we make public a letter written May 4 to Congressman Linthicum by his attorney, Ralph H. Case:

Law Offices
Ralph H. Case
Colorado Building
Washington, D. C.

May 4, 1916.

Hon. J. Chas. Linthicum,
House of Representatives,
Washington, D. C.

My Dear Mr. Linthicum:

I regret I was unable to get in touch with you

yesterday as matters developed during the day which I regard as of serious and grave concern.

The matter to which I refer is the meeting called by Dr. A. D. Melvin, Chief of the Bureau of Animal Industry of the Department of Agriculture, at which the delegates to the dairy men's convention were requested to be present. Notice of the meeting was published in the Chicago Dairy Produce and in the invitation Dr. Melvin stated that the details on which the report of his Bureau for 1912 was made would be disclosed and discussed. As it is on this report that your resolution, H. Res. 137, is in a large part based, I felt that the details and data on which the report was made would be of great interest to you. I also felt that it would be only fair to the dairy men that you or I be present.

I called Dr. Melvin on the telephone yesterday afternoon and requested that you or I or both of us be invited to attend the conference to be held today at the Department. Dr. Melvin stated that he had called the meeting for the purpose indicated and that he was most anxious that a full and free discussion be had, that he felt if you or I were present, there would be no free discussion of actual conditions by the dairy men. He, therefore, declined to give his consent to my request.

I then asked Dr. Melvin to furnish you with the full details on which the aforesaid report of 1912 was based. The Doctor stated that this would be a matter which the Secretary of Agriculture must decide. This, of course, is correct, but it seems to me that if these most important details are to be freely disclosed to the dairy men that you are equally entitled to them. It seems most strange that such a meeting as is being held this morning, a meeting to discuss and make public vital information, should be held in secret session. I

am anxious to know what it is that prevents the dairy men from talking freely and in public.

This morning, in compliance with your suggestion over the telephone, I called personally at the Department of Agriculture and saw Dr. Melvin. I repeated to him your request that I be allowed at the meeting. He said that if we insisted on being present it would mean that there would be no meeting. I stated to the Doctor that we regretted very much this attitude on the part of the dairy men and requested him to state to the meeting that we desired to be present and to say that there was no spirit of hostility on your part or on mine to the dairy industry, that there was no purpose to injure their business in any way, that we wanted to co-operate with them and if they would permit it we would co-operate with them to the end that the highly objectionable and dangerous situation disclosed at the hearing before the Rules Committee of the House might be cleaned up.

Dr. Melvin said he would make the statement to the meeting and I returned at once to my office. I submit this matter to you for your consideration and for such action in the premises as you may see fit.

Very respectfully,

RALPH H. CASE.

And now, though we are loath to jar him too harshly out of the state of coma which, alas, has but too surely enveloped "the writer" Van Winkle, behold an affidavit which, we fear, will roll him over on his other side:

DISTRICT OF COLUMBIA, To-Wit:

Ralph H. Case, being duly sworn, deposes and says,—

That he is an attorney at law with offices in the Colorado Building, Washington, D. C., and that he is now and has been since on or about April 1, 1916, acting as counsel for Hon. J. Chas. Linthicum, a Representative in Congress, in the matter of House Resolution Number 137, introduced by Congressman Linthicum, which resolution proposes the appointment of a committee of members of the House of Representatives to investigate and report on (a) whether conditions prevailing in dairies and dairy products seriously menace the health and property of people of the United States; (b) whether Federal inspection and supervision is necessary to the reasonable protection of the health and property of the citizens of the United States; (c) if so, then the best and most economic methods of inaugurating and enforcing such inspection and supervision:

Deponent further states that he read in The Chicago Dairy Produce on May 3, 1916, a letter of invitation signed by Dr. A. D. Melvin, Chief of the Bureau of Animal Industry of the Department of Agriculture, Washington, D. C., and addressed to the dairy men who were to represent the dairy industry in its various branches in a convention called to meet in Washington, D. C., on May 5 and 6, 1916, that said invitation stated that a conference was desired with the representatives of the dairy industry on May 4, 1916, at the Department of Agriculture between them, the said representatives, and the officials of the Department of Agriculture and that it was proposed to take up and discuss the details on which the report of the Bureau of Animal Industry on

dairy conditions in the United States was based and made, which report is published in the annual report of the Department of Agriculture for 1912.

Deponent further states that he, at once on reading said invitation, sought to reach Congressman Linthicum, but that Congressman Linthicum was absent from Washington on public business and it was not possible for deponent to reach him on that day, to-wit, May 3, 1916, until late in the evening as will hereafter appear.

Deponent further states that he, in the afternoon of said May 3, 1916, called the Department of Agriculture on the telephone and requested that he might talk with Dr. A. D. Melvin, who signed said invitation, that he did talk with Dr. Melvin over the telephone there and then and that he, deponent, stated to Dr. Melvin that he had seen the invitation aforesaid and greatly desired that either Congressman Linthicum or deponent be invited to be present and to listen to the discussion between the officials of the Department of Agriculture and the delegates to the Dairy Convention, that Dr. Melvin replied that he was anxious to have a full and free talk with the delegates aforesaid and that it was his purpose to take up the details on which the report of 1912 aforesaid was based, that he, Dr. Melvin, believed that the dairy delegates would not enter into such a discussion if he, deponent, or Congressman Linthicum were present at the proposed meeting, that he, Dr. Melvin, wanted to have "a heart to heart" talk with the dairy delegates and wanted them to talk freely and openly to and with the officials of the Department of Agriculture and that he was certain this result could not be obtained in the presence of deponent or Congressman Linthicum.

Deponent further states that thereafter on said May 3, 1916, he got in touch with Congressman Linthicum by telephone and told him of the facts set out above, that Congressman Linthicum thereupon instructed deponent to go personally to the office of Dr. Melvin on the following morning and before the hour set for said meeting and to present to Dr. Melvin his (Congressman Linthicum's) personal request that deponent be allowed to be present at the said meeting, that on the morning following on to-wit, May 4, 1916, deponent went in person to the office of the Chief of the Bureau of Animal Industry, Dr. A. D. Melvin, aforesaid, and met Dr. Melvin in person and delivered to him the personal request of Congressman Linthicum that he, deponent, be allowed to be present at the said meeting between the dairy delegates and the aforesaid officials then and there about to be held, that Dr. Melvin stated as on the day previous that he was positive that the dairy delegates would not take part in the proposed discussion in the presence of deponent and stated: "If you or Congressman Linthicum insist on being present it will mean that there will be no meeting." Deponent thereupon stated to Dr. Melvin that he had no wish to prevent the proposed meeting and he requested Dr. Melvin to state to the dairy delegates that there was no spirit on his part nor on the part of Congressman Linthicum to injure the dairy industry in any way and that he, deponent, and Congressman Linthicum wanted to co-operate with the dairy men if they would permit it

to the end that the situation shown by the aforesaid report of 1912 be corrected.

Deponent further states that it then becoming clear to him that should he insist on attending the meeting that there would be no meeting to attend and not wishing to obstruct any plan for the betterment of dairy conditions, and, relying on the statements of Dr. Melvin, for whom he has the highest regard, then, immediately, left the buildings of the Department of Agriculture and returned to his office in the Colorado Building and in order that he might faithfully and correctly preserve the facts aforesaid, did on that day, to-wit, May 4, 1916, write a letter to Congressman Linthicum setting out the facts as set out in this affidavit.

Deponent further states that the above and foregoing is a true and correct statement of facts and that both he and Congressman Linthicum were thereby effectually prevented from attending the said meeting between the officials of the Department of Agriculture and the delegates to the dairy men's convention, which meeting was held, as deponent is informed, in the morning of the 4th day of May, 1916, although deponent and Congressman Linthicum greatly desired to be present thereat.

RALPH H. CASE.

Subscribed and sworn to before me a Notary Public in and for the District of Columbia this 23rd day of June, A. D. 1916.

(Seal.)

LOUIS OTTENBERG.

Notary Public, District of Columbia.

And to think that the "writer" could possibly be present in Washington in the role of a somnambulist! Could it be that he attended a little hearing of his own in the lobby of the Raleigh?

CORN SYRUP COMES INTO ITS OWN.

Elsewhere in this issue is given a stenographic report of the first day's proceedings of the hearing on corn syrup and its use in foods which was held in the offices of the Illinois State Food Standard Commission, Manhattan Building, Chicago, June 21-23 inclusive.

It is proper at this time to point out the more vital points in particular and the portent in general of the hearing.

It should be understood, as a premise, that those who gave their opinions and the actual results of their investigations during the course of the two sessions of the first day are nationally recognized authorities in the realm of science. Their opinion is in every sense the last word in their specialty.

Those interested will, of course, read the report; so it would be superfluous to repeat here what is brought out clearly and succinctly in that report. Furthermore, it would savor of presumption to emphasize, at this point, the statements of the scientists who appeared before the commission.

To put it briefly, the results of the hearing are gratifyingly in favor of the truth, and the truth is as has been claimed for years by this publication, that corn syrup is a wholesome and nutritious food and, as such, always the equal, and, in some instances, the superior of cane or beet sugar.

The wholesomeness and purity of corn syrup have for the first time been authoritatively established by competent judges. No room for doubt is left. The

findings of the scientists are of indisputable nature.

The evidence showed clearly that corn syrup is composed of a sugar and that it would undoubtedly improve a given product up to a certain amount. The latter fact was supported by further testimony of experts that corn syrup prevented crystallization and made a sweeter and more velvety product.

It should be borne in mind that it was proved beyond the question of doubt that the assimilability and nutritive value of corn syrup were proven by the scientists to be at least equal to that of cane sugar and, if anything, slightly exceeding it.

There is good cause to hope that the old prejudice against corn syrup will be discontinued by the public as well as by food officials.

It is sincerely to be wished that the ruling of the Commission will be to the effect that the presence of corn syrup in a product will no longer have to be declared on the label. There would then be no more discrimination between corn syrup and sugar as sweetening agents.

THE AMERICAN FOOD JOURNAL takes great pride in the findings of these eminent scientists. As above intimated, we have for years tried to bring it home to the food commissions of the various states that corn syrup was a product in every sense deserving of recognition and confidence, that it was wholesome beyond question and at all times the peer of sugar in those uses to which it was destined. That corn syrup has at last come into its own is a matter of gratification to us who have struggled unremittingly for this victory. It is a matter of gratification to the manufacturers of this eminently beneficial product. And furthermore, it will be a great boon and blessing to the consumers of the land, since it is these who will reap the final benefit.

UNDER THE TOMAHAWK.

Elsewhere in this issue will be found the full text of the decision of Judge Amidon in the United States District Court for North Dakota, on the subject of Calumet Baking Powder. If any food official in the United States ever believed that albumen has an honest place in baking powder, or that it serves a decent purpose, he will be undeceived by reading this opinion.

The case was brought by the Calumet Baking Powder Company against Dr. Ladd, the Food Commissioner of North Dakota. Dr. Ladd had seized a number of cans of Calumet Baking Powder, claiming it is adulterated, because it contains albumen. Judge Amidon found the law defective, and did not sustain Dr. Ladd in his attempt to bar the sale of albumenized baking powder in the state.

On the facts, however, Judge Amidon found squarely with the Commissioner, and the decision is a complete vindication of Dr. Ladd, and a stinging condemnation of the Calumet Baking Powder Company for the use of deception and fraud.

The word "plaintiff" used by Judge Amidon in his decision refers to the Calumet Baking Powder Company. The following quotations are from the decision of the Court:

"The plaintiff is a large manufacturer of baking powder. In its product it inserts 15-100 of one per cent of dried white of egg. This substance serves no useful purpose in the leavening quality of the powder, or in any article of food in which baking powder is used."

"The addition of the egg albumen enables plaintiff

and its salesmen and demonstrators to use the water glass test. * * * Plaintiff's trade literature shows it has made use of this fact for purposes of deception. This has not been accidental. On the contrary salesmen and demonstrators are urged in the books put forth for their guidance, to use the water glass test for the very purpose of accomplishing this deception."

"I am convinced by the evidence that plaintiff and its agents have in the past made use of the water glass test for purposes of deception and fraud."

"It is because the water glass test may be used for purposes of fraud, and in the past has been so used, not accidentally, but as a studied effort of trade competition, that the use of egg albumen has been a just subject of criticism and condemnation."

No food manufacturer ever before received such a terrific grilling from a high court of justice, nor has been so mercilessly, though justly exposed for fraud upon competitors and deception of the people.

The Calumet Baking Powder Company has been restrained in the State of North Dakota from using the water glass test in promoting sales, or in any other way except upon its own powder by itself, for the sole purpose of determining whether this powder has lost its strength. It is inconceivable that any baking powder company, even Calumet, will long concede that its baking powder is so variable, and so poorly adapted to meet market conditions, that it is necessary to place albumen in each can to make possible a test to show whether it is spoiled. The reputable manufacturers of standard brands of baking powder find no difficulty in protecting their brands upon the merchants' shelves, or in the hands of consumers, without recourse to albumen.

The decision of Judge Amidon in no way interferes with the prosecution by Dr. Ladd of the case against Calumet Baking Powder in the State Court. This case is set for September, but whatever the outcome of that case may be, the decision of Judge Amidon means that the fraudulent water glass test has seen its day in the State of North Dakota.

U. S. SENATE FOR FREE PRESS.

The United States Senate has defeated Postmaster General Burleson's attempt to shackle the press of the country by gaining arbitrary power to route magazines and newspapers by either freight or mail.

After a lengthy debate on Section 7, the "press gag" clause of the pending postoffice appropriation bill, an amendment was adopted on June 28 providing for appeal from the "blue tag" rulings of the Postoffice Department to the United States Circuit Court of Appeals. It is also provided that there shall be suspension of the rulings of the department against publishers pending litigation.

A further amendment to Section 7 was offered by Senator Norris of Nebraska and accepted. It declares absolutely against freight shipment orders by the Postoffice Department where such orders result in unfair discrimination or undue delay.

Senator Ashurst pressed his motion to strike out the entire amended section on the ground that an investigation should be made by Congress. The motion was lost, 39 to 25.

The Norris and LaFollette amendments to Section 7, now incorporated in the postoffice bill, follow:

"That no publication shall be sent by freight (under ruling of the postmaster general) if such method of transportation results in unfair discrimination or un-

due delay of the delivery of such publication at its destination.

"And provided that whenever the owner of any publication required by the order of the Postoffice Department to be transmitted by freight shall feel himself injured and discriminated against he may apply to the Postoffice Department for an opportunity to be heard; that upon such application being duly filed in writing the order of the Postoffice Department as to the transportation of such publication shall be suspended, and the owner of such publication shall have opportunity to a full and fair hearing before said department.

"The testimony in any such hearing or proceeding shall be reduced to writing and filed in the Postoffice Department prior to entering an order from such hearing.

"That upon such hearing, if the Postoffice Department decides adversely to the contention of the publishers, such publishers shall have the right, within ten days after the date of the order of the Postoffice Department, made upon such hearing, to appeal to the United States Circuit Court of Appeals of the circuit within which such periodical is published, for a review of such order by such Court of Appeals, by filing in the court a written petition praying that the order of the Postoffice Department be set aside.

"Copy of said petition shall be forthwith served upon the Postoffice Department, and thereupon the said department forthwith shall further file and certify to the court a transcript of the testimony and the record.

"Upon the filing of the transcript the court shall have the jurisdiction to affirm, set aside or modify the order of the department.

"The jurisdiction of the Circuit Court of Appeals of the United States to affirm, set aside or modify such order of the Postoffice Department shall be exclusive.

"Such proceedings in the Circuit Court of Appeals shall be given precedence over other cases pending therein and shall be in every way expedited."

Senator Ashurst is reliably quoted as having said after the action of his colleagues:

"The action of the Senate in taking from the postoffice department arbitrary one-man power over the distribution of periodicals and providing for appeal from rulings of the department is a step in the right direction.

"Only one better course could have been pursued and that would have been to eliminate the entire section from the bill pending a full and complete investigation looking toward an equitable adjustment of postoffice transportation problems.

"It is unwise to permit one man to exercise power which amounts to censorship over the free publications of the United States. To give this power to one man without right of appeal from his rulings, as was proposed in unamended Section 7, amounts to political folly.

"The political party that hints at censorship of the press is doomed to defeat."

The American Food Journal is heartily in accord with the action of the Senate and the sentiments of Senator Ashurst. The freedom of an unmuzzled, non-bulldozed press is the keystone of true liberty. The day must never come when a political ego of any stripe or creed may hope to establish a personal censorship over our greatest institution.

Tentative Program for the Twentieth Annual Convention of the Association of American Dairy Food and Drug Officials—Detroit, Mich., Aug. 7, 8, 9, 10 and 11

THE Twentieth Annual Convention of the Association of American Dairy, Food and Drug Officials will be held in Detroit August 7th to 11th. The Hotel Statler has been selected as the headquarters of the Association. Whether you stop at the headquarters or not, it will be advisable to secure your hotel reservations early, as Detroit entertains many visitors during the summer and the hotels are always well filled. "A banner convention" will be the verdict. Let nothing stop you. Be with us from the fall of the gavel.

MONDAY, AUGUST 7, 1916.

10 A. M.—

Invocation.
Roll call by Secretary.
Address of welcome.
Response to address of welcome.
Appointment of committees by the President.
Report of the Secretary.
Report of the Treasurer.
Announcements.
Adjourn for luncheon.

2 P. M.—

Report of Credentials Committee.
President's address.
Amendments to constitution or by-laws.
Sectional meetings of the executives and chemists.
TUESDAY, AUGUST 8, 1916.

10 A. M.—

Paper—"Toxicity of Tin in Foods," by Mr. Salant.
Discussion.
Report of Committee on "Swells and Springs in Canned Goods," by Dr. L. M. Tolman.
Discussion by Commissioners.
Discussion by trade.
Report of Committee on Co-operation, by Chairman W. S. Matthews.
Discussion, led by Dr. Abbott.
Discussion by Commissioners.
Discussion by trade.
Adjourn for luncheon.

2 P. M.—

Paper—"Public Health in Relation to Food and Drug Control," by Dr. Price, Health Commissioner of Detroit.
Discussion by Dr. Lythgoe, of Massachusetts.
Discussion by Commissioners.
Discussion by trade.
Demonstration of Sterilizer for Farm Utensils by Dr. Geo. B. Taylor, Market Milk Specialist, Dairy Division, Department of Agriculture, Washington, D. C.
Sectional meetings of Executives and Chemists.

8 P. M.—

Sectional meetings of the Executives and Chemists.
WEDNESDAY, AUGUST 9, 1916.

10 A. M.—

Report of Committee on Drug Deterioration, by Dr. Caspari, Jr.
Discussion by Commissioners.
Discussion by Dr. F. C. Frances, of Parke Davis Company.
Discussion by trade.
Report of Committee on False Advertising by Commissioner Geo. L. Flanders.
Discussion by Commissioners.

Discussion by trade.

Report of Egg Committee, continued from last year, by J. B. Newman, Chairman.

Discussion by Commissioners.

Discussion by trade.

Adjourn for luncheon.

2 P. M.—

Report of Committee on the Assembling of Literature on Devitalized Foods in Their Relation to Nutritional Disorders, Dr. S. J. Crumbine, Chairman.

Address—Vitamines, Devitalized Foods, Nutritional Disorders, by Dr. Carl Voegtlein.

Discussion by Commissioners.

Discussion by trade.

Paper—"Tolerances in Weights and Measures in Food and Drug Control Work," by Commissioner Helme.

Discussion by Commissioners.

Discussion by trade.

THURSDAY, AUGUST 10, 1916.

10 A. M.—

Report of Committee on Conservation of Food Flavors, by Commissioner Foust, Chairman.

Discussion by Commissioners.

Discussion by trade.

Paper—"Food Control and the Pure Food Propagandists," by Miss Helen Louise Johnson, Watertown, N. Y., Chairman of Household Economics of the General Federation of Woman's Clubs. Special invitation to the Women's Clubs of the country at this session, as well as to all other sessions of the convention.

Paper—"Sanitation and Food Control Work," by Commissioner Frary, of South Dakota.

Discussion by Commissioners.

Discussion by trade.

Adjourn for luncheon.

2 P. M.—

Guests of the Parke Davis wholesale drug house; inspection of their establishment by the delegates and all others in attendance at the convention.

8 P. M.—

Sectional meetings of the Executives and Chemists.

FRIDAY, AUGUST 11, 1916.

10 A. M.—

Report of committee appointed to report upon "The Feasibility of a Uniform Law to Enact a Requirement for the Physical Examination of Employees Handling Food Products," by Commissioner Oscar Dowling, Chairman.

Discussion by Commissioners.

Discussion by trade.

Selection of next meeting place of Association.

Report of Resolutions Committee.

Report of Nominating Committee.

Election of officers.

Unfinished business.

Adjournment.

It is more than probable that Carl H. Vrooman, Assistant Secretary of Agriculture, will deliver an address before the convention.

Hearing on Milk and Milk Products

ON June 13th and 14th the Joint Committee on Definitions and Standards held two very interesting meetings at the Hotel Sherman, where the question of standards and definitions for milk and milk products was considered.

The hearing on behalf of the Joint Committee on Definitions and Standards was conducted by Dr. C. L. Alsberg of the Bureau of Chemistry, W. B. Barney, State Dairy and Food Commissioner of Iowa, and Dr. Julius Hortvet of Minnesota. Dr. Alsberg presided and J. S. Abbott, from the Bureau of Chemistry, acted as secretary. The different sessions were well attended.

Naturally, there was no definite action taken in regard to any standard or definition for milk or milk products, and the main purpose of the meeting was to confer and discuss with the representatives of the trade definitions and standards, and for that purpose the Committee presented some tentative definitions for use as a basis for discussion as, for instance, milk is the lacteal secretion obtained by the complete milking of one or more cows. Another suggestion of a definition was "Milk is the fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows properly fed and kept, excluding that obtained within fifteen days before and ten days after calving," in distinction to the present definition found in Circular 19 of the Bureau of Chemistry, which states that milk in order to be milk shall contain not less than $8\frac{1}{2}$ per cent of solids-not-fat, and not less than $3\frac{1}{4}$ per cent of milk fat.

Mr. A. L. Brockway and Mr. O. F. Soule, both of Syracuse, New York, representing the Holstein-Friesian Association, took an active part in the discussion at this point, and Mr. Brockway pointed out that in the State of New York at the present time any milk from which any cream has been taken is regarded as adulterated milk, and called attention to the fact that this law deprived some five million people of a cheap food, and a food which is now highly regarded by those in position to know its value, namely, skimmed milk.

Mr. Soule, in behalf of the Holstein-Friesian Association, recommended a definition that milk is the fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows properly fed and kept. It was the contention of the gentleman from New York that a standard for administrative purposes should be a fat standard or a fat and total standard, they being opposed to any triple standard, including the total solids-not-fat. Their position was that milk should be sold solely on its merits and labeled as to the percentage of fat contained.

It seemed to be the consensus of opinion of those present, that, if a standard of milk fat was to be adopted the maximum should be 3 or $3\frac{1}{4}$ per cent, it being generally conceded by those present that any standard above that figure would work a great hardship on the producers of milk. Others favored the adoption of a total solids standard, there being some objection among those present to a triple standard, including all three elements of standardization. Many of those present contended that the natural, pure milk from a healthy cow which contained a less percentage of butter fat than some of the suggested percentages should not be labeled, because of the fat content falling below the tentative required standard, as adulterated or skimmed.

Prof. Harding of the State University of Illinois, called attention to the fact that in the rainy months the natural milk contained a smaller percentage of butter fat, wholly due to natural conditions. Prof. Erf, of the State University of Ohio, stated that perfectly honest producers had been prosecuted and punished by reason of a $3\frac{1}{4}$ standard not being complied with.

"One of the greatest economic wastes that is being practiced in this country today," was Dr. Alsberg's characterization of the practice of throwing away or feeding skimmed

milk to animals, stating that it might properly be fed to human beings.

One of the proposed definitions for cream that was discussed was: "Cream is that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force, is fresh and clean, and contains not less than 18 per cent of milk fat."

In this connection the discussion as to whether skimmed milk should be regarded as resulting from the abstraction of all the fat from the milk, or whether it should be considered skimmed milk when only a portion of the fat had been abstracted was discussed, the consensus of opinion being that to define a partly skimmed milk, and a whole skimmed milk would cause a great deal of administrative difficulty.

There were those present who advocated the use of the term "separated" to distinguish a mechanically separated milk, and those who opposed this term claimed that it was merely an attempt at fooling the public by dressing a common article up in a fancy name.

In connection with the standards for buttermilk, the discussion developed the fact that since the last standard was adopted by the United States Government there had come into existence a great many new forms of so-called cultured buttermilks.

The discussion hinged as to whether buttermilk made with a bacterial culture should be branded, the same as the old-fashioned buttermilk.

With regard to the definition for pasteurized milk, many of those present expressed themselves in favor of leaving the definition for pasteurized milk as is at present set forth in Circular 19, which is:

"Pasteurized milk is milk that has been heated below boiling but sufficiently to kill most of the active organisms present and immediately cooled to 50 degrees Fahrenheit or lower."

Mr. J. W. Knobbe addressed the Committee and the representatives of the trade present on the practice of homogenization. The discussion following brought forth fully the different details of this practice. Mr. Knobbe stated that he was in favor of homogenization and that he thought it was a great benefit to the trade and to the general public, but contended that all homogenized products should be labeled exactly for what they were, as, for instance, a product made from butter and skimmed milk, should be labeled "Butter and skimmed milk."

A definition and standard for sweetened, evaporated milk was discussed, the Committee obtaining the views of those present as to what should be done in this regard and also as to the manner in which the product was made and marketed. Representatives of the Borden Company contended that condensed milk was generally considered a sweetened article, while evaporated milk was considered an unsweetened article, and urged definitions be adopted accordingly.

The Wisconsin Cheese Manufacturing District was well represented, all those present discussing the manufacture of cheese frankly and openly with the Committee, and all stating that whatever should be done should be done with a view of maintaining and increasing, if possible, the standard of American cheese.

Dr. Alsberg developed the fact, through discussion with the manufacturers of cheese, that it was impossible to detect by taste, or in any other manner, a cheese containing a high percentage of moisture, that had been honestly made, from a cheese containing a high per cent of moisture that had been made with a view of cheating the consuming public.

The different brands of American-made cheese were discussed fully.

Full Text of Decision of Judge Charles F. Amidon in Calumet Baking Powder Co. Case in the U. S. District Court of North Dakota — Old Chief White - of - Egg Mercilessly Excoriated — Painfully Near Collapse at End of Legal Bout

R EPRINTED here in full is the text of the decision of Judge Charles F. Amidon, in the District Court of the United States for the District of North Dakota, South-eastern Division, in the case of the Calumet Baking Powder Co. versus Food Commissioner E. F. Ladd of North Dakota. The order granting the preliminary injunction is self-explanatory and needs no amplification. It follows:

This is an application for a preliminary injunction. The suit is brought by the Calumet Baking Powder Company against Professor E. F. Ladd, as Food Commissioner of the State of North Dakota, and other officers who are associated with him in the enforcement of the pure food laws of the state.

The plaintiff is a large manufacturer of baking powder. In its product it inserts 15-100 of one per cent of dried white of egg. This substance serves no useful purpose in the leavening quality of the powder, or in any article of food in which baking powder is used. Its sole object is to adapt plaintiff's powder to the so-called "water-glass test." The leavening property of baking powder consists of carbon dioxide gas. This is given off by all such powders when they are brought in contact with water. In dough the gas is sufficiently confined to cause the dough to rise. If, however, water alone is added to the powder, the gas is given off, and quickly escapes into the air unless some element is present to confine it. That is the object of egg albumen. It forms a thin, viscous layer, which confines the gas. The so-called water glass test consists in mixing two teaspoonsful of baking powder in a like quantity of water in an ordinary water glass. When this is done, the gas is given off, the mixture foams and rises in the glass. In the case of baking powders which contain no egg albumen, a large part of the gas escapes, and the mixture quickly collapses. In the case of baking powders which contain egg albumen, a thin, viscous film is formed on the surface by which the gas is confined, and the expanding mixture is made to register in the glass the quantity of gas contained in the powder. It is conceded here that plaintiff's baking powder complies in every way with the food laws of the state, unless the adding of white of egg causes it to offend. It is also conceded that the white of egg used by plaintiff is wholesome, and that its presence in the baking powder does not render the product any less wholesome as an article of food.

What, then, is the ground of complaint against plaintiff's baking powder? It is this: The addition of the egg albumen enables plaintiff and its salesmen and demonstrators to use the water glass test. This test does not show that plaintiff's baking powder is any better than it is in fact; but it does make it possible to cause all baking powders which do not use white of egg to appear, in comparison with plaintiff's powder, to be less efficient than they are. This is due to the fact that in plaintiff's baking powder the gas is confined by the egg albumen, whereas in other baking powders it is permitted to escape.

Plaintiff's trade literature shows that it has made use of this fact for purposes of deception. This has not been accidental. On the contrary, salesmen and demonstrators are urged in the books put forth by plaintiff for their guidance, to use the water glass test for the very purpose of accomplishing this deception. Instructions are specific as to how that result may be attained. Plaintiff's trade literature has been improved to some extent of late in this particular, but I am convinced by the evidence that plaintiff and its agents have in the past made use of the water glass test for the purposes of deception and fraud. It is because the presence of white of egg makes this imposition possible that Professor Ladd, as Food Commissioner, has condemned baking powders containing that element. His regulation on the subject is expressed in the following language: "The addition of added albumen, egg albumen, etc., to baking powder, is considered an adulteration, and in violation of the statute." Acting upon this interpretation of the law of the state, he has issued bulletins condemning all baking powders which contain egg albumen, and has declared to dealers that the sale of such baking powders is illegal, and renders the merchant subject to the penalties of the Pure Food Statute. For the purpose of testing his interpretation of the law, he has seized a quantity of plaintiff's baking powder in the hands of a retail merchant, and has instituted a proceeding under the state statute to have the powder condemned and destroyed. That proceeding is now pending in the District Court of the Third Judicial District of the state. The bill alleges that these acts of the Food Commissioner have caused all retail dealers to refuse to purchase plaintiff's baking powder and has driven it from the market. It further alleges that plaintiff has an extensive trade in the state, and that the proceedings of the Food Commissioner have destroyed this trade, and have caused it great and irreparable injury, and will continue so to do unless the Food Commissioner is enjoined from enforcing the law according to his interpretation.

The application for the preliminary injunction is based upon the bill, affidavits and oral testimony. The question presented is whether the addition of egg albumen to baking powder subjects the powder to the condemnation of the state law. Plaintiff says it does not. The Food Commissioner says it does.

The statute in question is Chapter 200 of the laws of 1915 of North Dakota. Section 3 of the Act provides as follows:

"Any article of food shall be considered as adulterated * * * if any substance or substances other than dyes, flavoring or preservatives permitted by this Act have been added to it which deceive, or tend to deceive the user or purchaser as to the true qualities of the article or beverage, or which cause the article or beverage to appear to be superior to, or different from, its real qualities.

Does the addition of egg albumen to baking powder cause it "to deceive, or tend to deceive, the user or purchaser as to the true qualities of baking powder, or cause it to appear to be superior to or different from its real qualities?" That question has been submitted to two successive attorney-generals of the state, and they have both answered the question in the negative. After careful consideration I am persuaded that this interpretation of the statute is right. The evidence leaves no doubt upon two points. The addition of white of egg does not cause plaintiff's baking powder to appear any better than it is. The baking powder, by reason of the presence of that element, does not deceive, or tend to deceive the purchaser as to its qualities. Plaintiff's powder has all the qualities which it purports to have. In my judgment the statute deals with the article of food as it is offered in trade. It has nothing to do with the uses which may possibly be made of the article after it is sold. The deception in respect to plaintiff's baking powder consists in the fraudulent practices in connection with the water glass test. It should also be borne in mind that the water glass test does not cause plaintiff's baking powder to appear stronger or better than it is. The test simply causes other baking powders to appear less meritorious than they are in comparison with plaintiff's powder. If the statute had forbidden the addition of any article which is used in the sale of an article of food for purposes of deception or fraud, plaintiff's powder would have come within the condemnation of the law.

That the statute does not do. It confines itself to the article as it is offered in trade. It condemns any article which in and of itself deceives or tends to deceive, but says nothing about subsequent fraudulent uses that may be made of the article. This is a criminal statute. By a well established rule of interpretation its language cannot be enlarged. No person can be found guilty of a crime unless his act comes clearly within the language of the law creating the crime. It is not enough that the act comes within the general purpose which the legislature may have intended to accomplish by the law. No person can be condemned to criminal punishment unless the language of the law, when fairly interpreted, embraces his conduct. Applying that rule, it is my judgment that plaintiff's baking powder as it is offered in the trade does not deceive, or tend to deceive, the purchaser. It has all the qualities which it purports to have. It is up to the standard of wholesomeness, purity and strength required by the law. The fact that it is possible to use it by means of the water glass test for purposes of deception, does not bring it within the language of the statute which I have quoted.

Section 4 of the Act authorized the Food Commissioner "to prescribe standards of purity, quality and strength for all recognized food products. This provision authorizes him to make such rules and regulations in prescribing standards as are necessary to enforce the pure food statute. It does not, however, give him power to condemn any article by his standards which does not come within the condemnation of the law itself. In other words, under his power to fix standards the Food Commissioner cannot go outside the limits of the statute. The Act restricts him to fixing standards "of purity, quality and strength." He cannot condemn an article unless it is deficient in one of these particulars. It is not contended that plaintiff's baking powder is not pure, that it does not meet the requirements of the law both in quality and strength. It is not, therefore, competent for the Food Commissioner to condemn it by means of the standards which he prescribes. *Macy vs. Browne*, 224 Fed., 359.

It is plain, under the evidence, that the presence of egg albumen does make it possible to discover whether baking powder has deteriorated upon the shelves of the merchant. The evidence shows that the gas which is the active agent tends to escape, and that baking powders do deteriorate in the hands of the trade if kept for a considerable time in stock. While the water glass test is not

scientifically accurate, it is sufficient as a practical method of ascertaining whether baking powder has deteriorated.

When it is used for that purpose alone it serves a useful and legitimate purpose. If manufacturers of baking powders which contain egg albumen had confined the water glass test solely to this legitimate purpose, their powders would never have been condemned. It is because the water glass test may be used for purposes of fraud, and in the past has been so used, not accidentally, but as a studied effort of trade competition, that the use of egg albumen has been a just subject of criticism and condemnation.

Upon the argument of this case counsel for plaintiff stipulated in open court that if a temporary injunction would be granted substantially as prayed for in the bill, he would consent that it also embody a provision restraining plaintiff, its demonstrators, salesmen, and other agents, from using the water-glass test in any way in promoting the sales of its baking powder, or for the purpose of showing the strength of plaintiff's baking powder in comparison with other baking powders, or for any purpose other than the testing of plaintiff's baking powder to ascertain whether it has deteriorated in strength. The court accepts that stipulation and an injunction may issue embodying its provisions, and likewise restraining the defendants from enforcing the orders set forth in the bill, excluding from the State of North Dakota plaintiff's baking powders, and from causing further criminal prosecutions to be brought by reason of the sale of such powder, and from making any further seizures of the same as violative of the laws of the state, and from issuing and distributing bulletins or circulars condemning plaintiff's baking powder.

This decision is not intended to affect the proceeding now pending in the State District Court for Cass County.

This opinion is not to be used by any party to this suit, unless the entire opinion is used.

Dated June 16, 1916.

CHARLES F. AMIDON,
Judge.

OREGON EGG LAW INVALID.

The Supreme Court of Oregon in an opinion by Justice Bean, has declared unconstitutional and void section 6 of chapter 272 of the 1915 session laws, which required Oregon firms selling or using imported eggs in their products to advertise such sale or use in their places of business.

The decision was rendered in the case of the State of Oregon against J. C. Jacobson, appellant, and constitutes a reversal of the judgment of Circuit Judge Gantenbein, of Multnomah County.

The law was fathered in the last legislature by Dana Allen, representative from Marion County, and was aimed specifically to restrict the sale of Chinese eggs.

Holding against the contention of counsel for the state that the act in question was a proper exercise of the police power of the state, Justice Bean declared that the real purpose of the statute was to counteract the customs duty act of Congress admitting eggs without duty, and was discriminatory.

The court points out that imported eggs are subject to the Federal Pure Food and Drug Act, and that the 1915 statute makes a sale of food articles not meeting the standard set for them a penal offense. The section is declared beyond the power of state legislation and void.

GETTING DOWN TO IT.

Word has come to us that the Weis Fibre Container Corporation of Monroe, Mich., has declined to sell any further orders of containers to one of their Buffalo customers, owing to the fact that this customer had been putting out milk which ran very high in bacteria count, and sometimes low in butter-fat.

The Weis Fibre Container Corporation is to be commended for working in such close harmony with the health board, and is taking a step in the right direction to foster confidence in the fibre container—not only on the part of the housewife and consumer, but health and food officials, dairymen, etc., as well.



Washington D. C. News Letter



WASHINGTON, D. C., June 30.—Attorney General Gregory, early in June, was invited to bring anti-trust suits against Hawaiian canners of pineapples and packers of tuna fish and Columbia River salmon. The suggestion that he should do so came from jobbers in New York City who think that because the packers mentioned quoted identical prices a short time ago, the horrors of the Sherman and Clayton laws might well be invoked against the canners and packers.

Thus far nothing has come to the Department of Justice upon which the attorney general could act. It is possible that something may come, but so far as can be learned, there is no evidence of anxiety on the part of the attorney general to go after the scalps of any of those engaged in supplying wholesale grocers with the canned articles before mentioned. On the contrary, there are many reasons for believing that he would like it just as well if the grocery jobbers allowed him to spend a peaceful and restful summer.

It has been pointed out, unofficially, that the mere fact that canners quote identical prices is not sufficient to subject them to the penalties of the law. The fact that such identical prices were quoted would be only one of several facts to be proved before anything could be done to the canners.

On account of recent decisions under the anti-trust laws, one of the things to be proved is that the thing done by those accused of violating the law resulted in an unreasonable restraint of trade. Only unreasonable restraints are unlawful.

The statute itself does not say that only unreasonable restraints are unlawful, but the supreme court in the oil and tobacco cases pointed out that to insist that the law forbids all restraints makes it ridiculous. The court conceived the purpose of the lawmakers was to prevent evils and to punish those proved to have done evil.

The complaining New Yorkers made no allegation of fact other than that the prices quoted by the canners have been identical. They took that fact to be evidence of a combination in restraint of trade denounced by the statute. They did not allege the prices demanded by the canners to be exorbitant or out of reason.

It is extremely doubtful whether, even if the New Yorkers can prove the canners have consulted and combined, Mr. Gregory will file a suit or suits. The tendency nowadays is to leave business men work out their problems by allowing them to consult with each other to the end that they may make arrangements for conserving their interests, particularly to allow them to prove to the price cutter that he is not merely wrestling his own capital but also that of others in the business.

The tuna fish packers, nearly a year ago, appeared before the Federal Trade Commissioners to say to them that they were being ruined by sales of their product at prices below the cost of production. They wanted that new trade body to advise them as to how they could put a stop to such price-making without falling afoul of the anti-trust laws. Of course the commission has never given them formal advice on that subject. It is believed, however, that one or more of its members have advised the tuna fish canners to consult the coal operators in Franklin County, Illinois, and find out how they proposed dealing with such a situation.

Those operators were confronted with such a situation eighteen months ago. They solved it by hiring a man to gather statistics for them, which he transmitted to each operator in the association. The figures submitted showed the transactions of the day or two days before. Every operator was supposed to truthfully report the sales he made, to whom, and the price obtained. He also reported the number of tons of coal mined, the wages he paid and all other facts necessary to show the cost of mining and selling his product.

The idea was that if every operator was able to check up on his neighbor, and also on himself, cutting of prices below the cost of producing and marketing of coal would die out. The plan was submitted to the commission for its observations. That body could not say the plan itself would be a violation of the law. All it could say was that the law is concerned, not with methods, but with facts as to how an unreasonable restraint in trade is brought about; that it cares nothing about methods, only results.

That plan was modeled on the work that blast furnace men inaugurated several years before that. A statistician, on his own hook, got up statistics showing a number of blast furnace men that at the prices they were selling their pig iron, the result was the wasting of their investments. He suggested that he should be employed to gather facts for an association that would enable each man to see whither he was headed by reason of the prices he was making. The result has been beneficial.

Not once during the terrible depression following the Underwood revision of the tariff did pig iron go below the average cost of producing it. Before that system of telling each man how much it cost him to make a ton of pig iron, prices away below the cost of production were not infrequent, especially in the panicky years, of the nineties, when another tariff revision threw the industry into confusion and bankruptcy.

Ever since the Federal Trade Commission was organized, Edward N. Hurley, who became chairman of the body on July 1, has been urging business men to find out their cost of doing business as the first step toward sanity. He has urged the formation of associations to carry on such work, patterning in that feature of the crusade in behalf of cost accounting, the Germans, especially the Prussians, whose government forced them into combinations to prevent the disastrous price wars that came when business, for one reason or another was dull. The Prussian government not only fostered, but actually forced the formation of trusts. It held that no man is a free agent to bring ruin either upon himself or his neighbors.

The Trade Commission has followed that policy as nearly as it dared. It has been held in check by a realization that there are still millions of Americans who interpret the saying, "Competition is the life of trade" as meaning that price-cutting is the life of trade. The Trade Commissioners agree that price cutting is the life of trade when it is being done intelligently upon the knowledge that the man who is giving more for the money he is asking than somebody else who is not running his business in an efficient manner. That sort of price cutting they do not frown upon.

Commissioner Parry of that commission, on July 27, began taking testimony in the complaint it has filed against the Shredded Wheat Co. on the allegation of the Ross Food Co. that it is practicing unfair methods of competition. The Ross company has been making shredded wheat biscuits and selling them in Connecticut. It alleged that the older company's unfair methods consisted of threats to sue grocers handling the Ross biscuit for infringement of trade marks and patents and forcing a company that furnishes rolls for shredding wheat to enter into a contract agreeing not to make rolls for anybody for six months after it has made such rolls for the Shredded Wheat Co. on pain of losing its patronage.

The Shredded Wheat Co. sued the Ross company and a wholesale grocer in Connecticut asking the court to enjoin them from imitating the product of the older concern, either in shape or color, alleging that it has a trade right to the shape and color.

The Shredded Wheat Co., at a preliminary hearing on June 1, moved that the Trade Commission remit the whole matter to the Connecticut court on the ground that the commission had no jurisdiction and that by proceeding with

its complaint based on the allegations of the Ross company it was seeking to diminish the jurisdiction of the Connecticut court.

C. K. Offield of Chicago, attorney for the older company, declared to the commission that it has no jurisdiction now that all the questions in issue between the two companies are before the court in Connecticut. He denied that there is any public interest in the dispute between the two companies that is not being served by the litigation in the Connecticut court. He said there can be no decision by the commission that cannot be made by the court. He might have added that even if the commission makes an order against the older company, it cannot be enforced except upon the commission's going into court asking the Shredded Wheat Co. to obey.

The commission overruled the motion of the Shredded Wheat Co., hence the taking of testimony, in Buffalo, which was begun on June 27.

The war in Europe and the threat of war in Mexico, will make it unnecessary for any of the canners or packers to even think of cutting prices. They can make identical terms without much danger of having the fact taken as conclusive or even persuasive evidence of a combination, because the market is now a buyer's market and not one made by a seller grasping at straws to save himself from financial drowning.

DAIRY FARMING RECEIVES BOOST.

Dairy farming in Southern Illinois was given another strong boost at the celebration of "Dairy Day" at Harrisburg recently. Many distinguished speakers were on the program, and a big parade, speeches, contests, and the award of prizes kept the big crowd interested.

President A. H. Smith of the New York Central Lines, who made a special trip here for the purpose, awarded two prize calves—a bull and a heifer—to the boy and girl who won the cow-judging contest for children. After much pulling and mauling, in which W. Scott Matthews, Illinois Dairy and Food Commissioner, proved of valuable aid, the calves were brought to the top of the court house steps and the names of the winners were announced.

"Jimmie Baker," called out President Smith. The freckled face of a thirteen-year-old boy popped under the railroad official's elbow. Jimmie had heard about the decision of the judges in advance, and saw to it that no time was lost in responding to his name.

"Jewell Thomas," next called President Smith. There was no response. Finally, a search of the courthouse grounds revealed the missing Jewell, and she was conducted to the platform. It required some little persuasion to get her to face the spectators and when she did, they applauded.

Jewell soon forgot her shyness in her admiration of "Kate," the four-months-old heifer that a successful filling out of her score card had won for her. Much to the delight of the spectators she implanted a good kiss smack on the forehead of the black and white Holstein, at the same time giving her new pet a hearty hug.

The calves are valued at \$600 in the aggregate and were donated by President Smith for the purpose of encouraging children in the dairy industry. The winners of the prizes are children of farmers in Saline County. The boy made a perfect score, as his marks tallied with those made by the agricultural experts. Over 200 children were contestants in the event.

The speakers were B. H. Rawl, chief of the Dairy Division of the United States Department of Agriculture; W. W. Marple, of the Business Men's Dairy Extension Movement; Commissioner W. Scott Matthews of the Illinois Dairy and Food Department; Len Small, President of the State Board of Agriculture; J. P. Mason, President of the Illinois Dairy-men's Association, and President Smith of the New York Central Lines.

True to its name it was a real dairy day, with milking contests, cow judging contests, and a big parade of fine dairy cattle, including ten bulls donated by the Big Four Route for the use of farmers in this section.

Mounted on a barrel in a section of the main street that

had been roped off for the cattle, John M. Crebs, Chairman of the Dairy and Agricultural Committees of the Illinois Bankers' Association, called out the numbers of the high-grade cows purchased by the four banks of Harrisburg to be allotted to the farmers of this section on an easy payment plan to encourage them to begin dairying.

Eight bands, including delegations from Chicago, St. Louis and Evansville, Ind., were in the line of march. The spectators, packed solid from the curbing to the store fronts, cheered the boy scouts and laughed at the mirth-provoking signs carried by the Evansville delegation.

Particular interest, however, was centered in the division devoted to pure-bred bulls and cows—chief factors of the celebration—in whose honor they had been set apart, and no one present bore a happier smile than Commissioner Matthews, the originator of this form of celebration to impress communities with the advantages of dairying correctly conducted.

Commissioner Matthews has been criticized in certain quarters for what this paper considers a highly praiseworthy course of conduct in office. He is placing cattle where there were no cattle, and is educating the farmer of Southern Illinois to a realization of the importance of the dairy industry and the desirability of blooded stock. His critics hint that he is exceeding his authority. He is doing no such thing. He is merely performing a part of his duties as laid down by the very nature of his office.

F. L. SHANNON RESIGNS.

F. L. Shannon, State Analyst of Michigan, resigned his position July 1, to become chief chemist for the Thomas Canning Co. of Grand Rapids, Mich. The State of Michigan loses a distinguished servant in the person of Mr. Shannon. He has served since 1911, regardless of varying political administrations. To him belongs the distinction of having discovered "formic acid" as a preservative of food products and he is the originator of the most practical portable food and drug exhibit known. Mr. Shannon is at present Secretary of the Chemists' Section of the American Dairy, Food and Drug officials and occupies high positions in a number of the food and drug bodies. A. R. Todd succeeds Mr. Shannon.

HEARING ON FEED PRODUCTS.

A public hearing on how to brand corn feed meal and hominy meal, hominy feed, or hominy chop under the Food and Drug Act will be held in Chicago on July 12, 1916, by representatives of the Bureau of Chemistry of the United States Department of Agriculture. All persons interested are invited to attend. Those who desire may present their views in writing to the Bureau of Chemistry, Washington, D. C., on or before the date set for the hearing. The department desires to obtain from the trade and others definite and accurate information concerning the correct meaning of the terms "corn feed meal" and "hominy meal, hominy feed, or hominy chop," and what should be the composition of products sold under these terms. The hearing will be held at 10 A. M., on July 12, 1916, in the Hotel Sherman, Randolph and Clerk streets, Chicago, Ill.

EXTRACT MANUFACTURERS CONVENE.

The annual convention of the Flavoring Extract Manufacturers' Association was held June 28-30, inclusive, at Atlantic City, N. J.

Headquarters were established at the Marlborough-Blenheim Hotel. Many interesting papers were read before the convention and much good work was accomplished.

Although anticipating the accusation that he is entering upon an ambitious program, State Food Commissioner C. E. Harman of Nebraska announces that he proposes to submit a constitutional amendment providing for the appointment of the state food, drug, dairy and oil commissioner by the governor for a period of six years. He has prepared petitions and is sending them out to be signed by voters who may be willing that the question may be submitted to a vote of the people.

Corn Syrup Under Spyglass of Country's Most Noted Scientists Unqualifiedly En- dorsed by Expert Testimony at Hear- ing Held June 21, 22, 23, by Illi- nois State Food Standard Commission

THE most sweeping victory won in many a day by a food product standing for judgment before a body of scientists and awaiting their verdict on its merits alone, was that earned by Corn Syrup at the hearing held on corn syrup and its use in foods, June 21, 22, 23, by the Illinois State Food Standard Commission, in the offices of the Commission, Manhattan Building, Chicago.

The proceedings of the first day were confined to scientific testimony as to the wholesomeness of the product. Thursday, the second day, was given over to manufacturers and distributors for discussion, while Friday, the third and final day of the hearing, the discussion was confined to the trade and consumers.

It is worthy of note that the scientists who gave the findings, after exhaustive research, at the hearing, rank second to none in their chosen branches of science.

The entire hearing was remarkable for the spirit of mutual understanding and harmony which marked it. Seldom has an event of this kind come to conclusion with so little of bias or friction. The entire proceedings of the first day are given verbatim in this issue. The second and third days' sessions will be printed in succeeding numbers of this paper:

The hearing was called to order by Dr. Haines, acting as chairman, who occupied the chair during the first day of the hearing.

Dr. Haines: The hearing will now begin. I believe it is generally understood as to the character of this hearing, the purpose for which it is called. A number of months ago one of the large producers of corn syrup, commercial glucose, requested the State Food Standards Commission to revise their standards for certain foods, so that there might be a more liberal use of corn syrup, commercial glucose, in them. This was considered by the commission, and it was finally voted that we should make an investigation concerning these products, and reach some conclusion regarding whether the new standards should be made, or not. A call was sent out for hearings upon this subject, and I will ask the secretary to read the call.

Secy. Sullivan: "The Illinois State Food Standards Commission announce hearings for Wednesday, Thursday and Friday, June 21, 22 and 23, 1916, at the office of the commission, 1627 Manhattan Building, promptly at 10 a. m., on corn syrup (glucose), and its use in foods. All interested are invited to be present. The first day, Wednesday, June 21, will be confined to scientific testimony as to the wholesomeness of the product. The second day, Thursday, June 22, the discussion will be confined to the manufacturers or distributors. The third day, Friday, June 23, the discussion will be confined to the trade and consumers. Each group will be requested to take part in the discussion on the day assigned to them, but they are invited to be present on other days. (Signed) W. Scott Matthews, Dr. Walter S. Haines, Thomas P. Sullivan."

Dr. Haines: Today, therefore, the hearing will be confined to scientific testimony as to the wholesomeness of corn syrup, commercial glucose. There clearly are two questions involved here. First and primarily, most important of all, is the question whether corn syrup, commercial glucose, is harmful in any way; whether, if taken, it can produce, either positively or negatively, any ill effects. This is the first, of course, and most important matter to be considered. Second, in this hearing today comes the question of the nu-

tritive value of corn syrup, commercial glucose. What nutritive value has it? Is it possessed of any nutritive value; and if it has nutritive value, what is it? These are the two important questions to come up this morning, and we shall be glad to hear expressions of opinion from any who are present who have knowledge regarding these matters. I might state that we have received a number of briefs concerning these matters from a certain number of scientific gentlemen, most of whom are here, respecting these matters; and the commission has gone over these briefs. Now, when these gentlemen speak on these subjects, I do not think it will be necessary for them to go into detail. If they will present their conclusions, it will probably be sufficient. If, however, any one is present—any member of the commission or any member of those in the audience, who wishes to ask questions concerning these conclusions, or concerning any investigations, they, of course, are at liberty to do so. One of the gentlemen who sent in, with others, a brief on this subject, Dr. Ludwig Hektoen, is unable to be present today to speak. His colleagues, I believe, or co-laborers in some investigations, will speak for him. He, however, has addressed a small communication explaining his absence and his views, and I call upon the secretary to read that communication into the record.

Secy. Sullivan: "I beg leave to say that the results of the work of Drs. A. J. Carlson, E. R. Le Count, and myself, on the effects of commercial glucose when fed to white rats, are accurately and fully presented in the typewritten report submitted to Dr. W. S. Haines, and also in the article by A. J. Carlson, L. Hektoen, and E. R. Le Count, entitled, 'The effect of commercial glucose when fed to white rats,' in the journal of the American Chemical Society, Volume 38, April, 1916. In my own reading of the literature, and in the course of work just described, nothing whatever has come to my notice to indicate that glucose used in the diet in the same way as sugar ordinarily is used, has any harmful effects on men or animals."

Dr. Haines: I believe that Dr. Wagner has some preliminary statements to make. I would like to call on him, therefore, first of all.

Dr. Theodore B. Wagner, produced as a witness before the commission, testified as follows:

My name is Theodore B. Wagner, I reside at 160 Columbia Heights, Brooklyn, New York. My office address is 17 Battery Place, New York. May it please the Honorable Commission: I would like to make a brief statement in behalf of the American Manufacturers' Association of Products from Corn. In making the request to which Dr. Haines referred, for a more liberal ruling on the use of corn syrup in food products, the association which I represent was well aware of the fact that in going into court with any matter, it must come with clean hands. Any one who has read the public statements which have appeared for the last 30 years or so in the daily papers and trade papers, and in magazines, might well be justified in doubting and questioning the purity and wholesomeness of corn syrup, and even its method of manufacture. About 30 years ago the agitation against corn syrup reached such a point that it was seriously proposed to levy a tax upon corn syrup when used in food products; and the Commissioner of Internal Revenue, before whom the matter came up in the ordinary routine of business, found himself rather in a dilemma. He wanted to be fair, and did not quite see the justice of those demands; and in order to satisfy himself, as well as the government officers, he submitted the question of wholesomeness to a body of scientists known as the National

Academy of Science; and they, in the course of time, undertook a very thorough investigation of glucose, so far as the methods permitted at that time. The report which they submitted in 1883, I think it was, set forth that no evidence could be found indicating that glucose was not a wholesome product, and that the Academy of Science had investigated the methods of manufacture, and satisfied itself that they were free from any objections. One would have thought that a report originating with a body of men such as represented by that National Academy of Science would suffice to stop any further attacks upon glucose or corn syrup; but I am obliged to state that such was not the case. Even within the last ten years articles were published through media where they were intended to produce the greatest possible damage. In other words, in journals which reached the homes, reached the housewives, over the signature, even, of a chief officer of one of our important departments in Washington, over the signature of the Assistant Chief Chemist of the Bureau of Chemistry in the United States Department of Agriculture, glucose was placed in a class with benzoic acid, sulphate of copper, boracic acid, aniline dyes, and formaldehyde, appearing in this group of substances which are not food, and some of which are looked upon as poisons. The article in question appeared in the *Woman's Home Companion* of April, 1905, page 8, and is entitled, "The Truth About Food Adulteration, by Henry Irving Dodge." There is an editor's note, which I would like to quote and read into the record: "Editor's note. This series of three articles, of which this is the second, has been prepared with the co-operation of the Chief of the Division of Foods of the United States Bureau of Chemistry. In May, under the caption, 'Call a Spade a Spade,' Mr. Dodge will suggest the remedy for this evil." The manufacturers of corn syrup have carried on a very extensive campaign trying to educate the public to the true merits of corn syrup; and yet as recently as last year appeared in one of the leading papers of New York an article written by one McCann, under the heading of, "Glucose a Man Killer, Say Rockefeller Scientists." It is needless for me to say that the scientists referred to, being members of the Rockefeller Institute for Medical Research, never made any such statement. One of the companies started a suit against the newspaper for damages of \$250,000. The suit, however, was not prosecuted, because the editor of the *New York Globe* caused Mr. McCann to publish a retraction in his paper, taking back every word that he had said, in misquoting the work of Drs. Meltzer and Kleiner.

The Chairman: Have you a copy of that retraction?

Dr. Wagner: I expect to have it here this morning. I would like to put that into the record.

Dr. Cutler: It is in your files, Mr. Commissioner. It has been sent to this office, and it is in your files now.

Dr. Wagner: The Association, therefore, realized that it was beyond its power to break down these attacks upon corn syrup unless the purity and wholesomeness of glucose could be established by men whose word and findings would not be subject to doubt. The suggestion was made that inasmuch as Illinois is the leading state in the production of corn, and inasmuch as Illinois has the largest number of corn syrup factories, and inasmuch as the Illinois Food Standards Commission, I believe, is the only commission which has the power to fix standards which have a standing in law, it was thought fitting that if an investigation should be made, it should be made right here in Illinois. Dr. Hektoen, to whom reference was made a few moments ago here, was consulted in the matter, and without going into detail, I will say that eventually a plan was worked out by him whereby this subject of the wholesomeness of glucose would be gone into by a number of disinterested scientists, in no way connected with the industry of corn products. This work was done during a period of, I believe, about eight months. It is not for me to go into that work, because that will be explained to you by the authorities themselves. I believe, however, from what I have read in the articles published—and I understand that the one article dealing more with the chemical phase of it is still in manuscript, and has not as yet been published, although it is to be published within the next few weeks—that the wholesomeness of glucose has been established beyond question of doubt; and that glucose, as an article of food, ranks in nowise second to cane sugar. I believe, Dr. Haines, this is all that I care to say at this time. The scientists are ready, and will, I am sure, answer any questions which you may want to put to them in connection with their work.

Dr. Haines: The commission has received a brief from Dr. Wesener and Professor Teller, chiefly on the subject of

the composition of corn syrup, commercial glucose; and as this lies at the basis of all of the subsequent work, I believe it would be quite the best order to call upon those gentlemen to give us, in brief, the results of their investigations. As I said a few moments ago, where briefs have been handed to the commission, as in this case, we do not think it necessary to ask the investigators to go into details, but to give chiefly their conclusions. Then if the commission wish to ask questions they will do so; and if any of the audience wish to secure details, they are at liberty to do so. The commission would be glad, therefore, to hear from Dr. Wesener upon the subject of the composition of corn syrup, commercial glucose. We shall be glad if each witness will kindly give his name, residence, occupation, etc., as a means of identification in the record.

Dr. John A. Wesener, produced as a witness before the Commission, testified as follows:

My name is John A. Wesener. My residence is 4608 Malden Street, Chicago. My office is 31 North State Street. Gentlemen of the Commission: My associate, Professor Teller, and I undertook the investigation of the chemical composition of commercial glucose, and its digestibility. We have been at this work, I should say, about 14 or 15 months, and have just finished our work. The manuscript is before me here, but it has not as yet been published. However, as Dr. Wagner has said, we expect to see it published very shortly. I really do not want to take up much of your time, as there are many other speakers to follow, so with your permission I will just give you the summary, because I think we have the points stated there in a very concise form. As to more than details of the chemical composition, my associate, Professor Teller, will be very glad to give you that information.

"Commercial glucose is a complex body of viscous consistency, running about 42 degrees to 45 degrees Beaume and containing from 80 to 85 degrees of solids and 15 to 20 per cent of water. It is nearly water white and possesses a mild, sweet taste. The solids are composed almost wholly of sugars and dextrins, a minor portion consisting of a trace of mineral matter.

The ash, which is present to the extent of mere traces, consists of mineral salts, including phosphates, sulphates, chlorides and carbonates, chiefly of sodium and lime. Tests for arsenic and other poisonous metals show these not to be present.

Nitrogenous substances are present as a mere trace, chiefly as protein bodies, amounting to about .96 per cent.

It has been quite well established in the chemical literature that commercial glucose consists of dextrins and reducing sugars. Some authorities hold that the reducing bodies consist almost entirely of maltose, while others hold that they are a mixture of maltose and dextrose, together with some unknown unfermentable substance which has been called Gallisin by some and Isonaltose by others.

In our work we have determined that the fermentable reducing sugars are a mixture of maltose and dextrose by calculations based upon their quantity as determined by reduction and upon the amount of gas developed by fermentation with yeast. The amount of gas thus produced is too large to allow of the fermentable sugars as determined by reduction to be calculated wholly as dextrose and too small to allow of their being calculated wholly as maltose. With different lots of glucose the relation of the maltose to the dextrose and the amounts of each will vary to some extent. Our determinations on two samples show 11.7 and 17.2% of dextrose and 22.9 and 16.4% of maltose, respectively.

Our further researches lead to the conclusion that at least three reducing bodies are normally present; namely, maltose, dextrose, and a third which is less readily fermentable by ordinary bakers' yeast, but which may be made fermentable by the action of certain enzymes, especially those present in pancreatin, taka-diastase and malt, as well as by the hydrolytic action dilute hydrochloric acid under the influence of heat. These difficultly fermentable reducing bodies amount to about 14% of the total glucose when calculated as maltose, or 8% when calculated as dextrose. The unfermentable carbohydrate residue remaining after removing the maltose and dextrose by fermentation consists of those bodies commonly recognized as dextrins. These dextrins, like the unfermentable reducing bodies, when subjected to hydrolytic action by diastase result in products which will under suitable conditions undergo almost complete alcoholic fermentation. When they are subjected to the hydrolytic action of hot dilute acid, applied either to the unfermented glucose or to the residue left after the glucose has under-

gone alcoholic fermentation, all of these bodies become wholly fermentable.

Cold water extract of malt as the source of the diastase was found less suited for the purpose than pancreatin or Taka-diastase because of the larger proportion of unfermentable bodies which it contained and introduced into the products of fermentation.

It was found that a good quality of Taka-diastase converted the unfermentable products into fermentable sugars, leaving only a very small amount of unfermented residue, which residue contained as reducing sugars less than one per cent of the glucose taken. In the most favorable instances the total unfermented residue amounted to from four to five per cent, which residue included normal products of fermentation, notably succinic acid and possibly some glycerine, which always results from the fermentation of sugars by yeast. The diastase present in good samples of pancreatin and in the cold water extract of malt in like manner converts the unfermentable residue of the glucose into fermentable sugars, but in some instances less completely than does Taka-diastase.

In these experiments it was found that the kind of yeast used had a considerable influence upon the completeness of the fermentation of the products produced by the action of the several diastases.

Isolated ferments like pancreatin and Taka-diastase lose their activity with age and when these weakened ferments act upon glucose the result of the decreased vitality is a decreased proportion of immediately fermentable sugars, and an increased proportion of the unconverted dextrins, and of the intermediate unfermentable reducing carbohydrates or reducing dextrins. These conditions are also clearly apparent where weakened pancreatin or weakened Taka-diastase or a limited amount of diastase acts upon starch of various kinds. The apparent results of such action are an extended row of products, including the well-recognized dextrins, unfermentable reducing bodies (apparently reducing dextrins) maltose and dextrose. The fact that the first bodies in this series are found to a limited extent only, when there is a sufficient amount of the active diastase present, but are abundant when there is a limited amount present, indicates that they belong to a natural series of changes between starch and dextrose. The results of our examination of glucose and of the products of the combined action of diastase and yeast upon glucose, indicate that all the bodies of this series are normally present in glucose, which is produced by the incomplete hydrolysis of starch by acids, just as they are present in liquors containing the products of the incomplete hydrolysis of starch by diastase, and that these bodies in glucose yield further treatment with diastase, just as to those produced by diastase itself. From these facts, it is apparent that the claim for the presence in glucose of unfermentable reducing bodies as reversion products brought about by the action of the acids at a high heat is untenable.

A study of the action of hydrolytic agents and yeast on carbohydrates entering into common foodstuffs, such as potatoes, breakfast cereals, bread, and so forth, and upon pure starches, such as are found in these various food products, has been made in comparison with parallel experiments on glucose. In these experiments it was found that the carbohydrates of glucose agree closely in gas production with the carbohydrates of the more readily digestible foodstuffs, such as white bread, breakfast cereals and potatoes. It was also found that these several carbohydrates when acted upon by isolated ferments and yeast, as in the experiments conducted, yield variable but appreciable amounts of unfermentable carbohydrate products, just as the mashing of cooked starch with malt diastase in the making of malt liquors results in a liquor which after fermentation contains appreciable quantities of such unfermented and apparently unfermentable carbohydrate products.

The fact that commercial glucose, when it is treated with diastase and then subjected to yeast fermentation, is almost wholly converted into alcohol and carbon dioxide goes to prove that it consists of products that are wholly assimilable, and, therefore, it furnishes a food to the body of a sugar nature. In this respect it is a more concentrated and at the same time a more readily assimilable food than are most of the carbohydrates belonging to the ordinary foodstuffs which first have to undergo cooking and then complete hydrolysis by the action of the digestive enzymes before they can be utilized by the body. In this respect glucose, pound for pound of dry weight, will furnish at least as much energy as does cane sugar.

Now, with reference to the caloric value—

Dr. Haines: Dr. Wesener, I would like to ask those questions a little later.

Dr. Wesener: Very well. Then I will stop right here.

Dr. Haines: I should say, on behalf of the commission, that we wish to ask certain questions of all of these scientific gentlemen—all of them, of course, relevant to the subjects that they speak upon; but I think they will be better understood if they be presented later. Therefore, for the present we will confine ourselves to the immediate subjects brought up by Dr. Wesener. Is there anything that you would like to add, Professor Teller, as you worked with Dr. Wesener? Are there any other points that you wish to present in addition?

Prof. Teller: I do not know that there is any point that is of special importance, unless it be the caloric heat of the substances, that Dr. Wesener was going to mention.

Dr. Haines: Will you reserve that, Professor Teller, until a little later, when we will take that question up? The calories, you refer to, do you not?

Prof. Teller: Yes, sir.

Dr. Haines: We will take that up a little later, and at that time we shall be very glad to hear from all of you gentlemen. I believe it would be a little better to confine our discussion just at the present time to the subject of the composition of the material.

Prof. G. L. Teller, produced as a witness before the commission, testified as follows:

My name is G. L. Teller. My residence is Riverside, Illinois. At the present time I am practicing chemistry in a laboratory in Chicago. A large part of our work on this subject of glucose has been confined to a determination of the character of the different carbohydrates which are present in it. As has been stated in our conclusions, we have arrived at the finding that there are at least three or four different substances present. One of them is dextrose, which is among the saccharides, the complete result of the hydrolysis of other saccharide bodies and of starch. The next is maltose, which is an intermediate product between dextrose and starches. A third body, which appears to have been classed as gallisin by some, and as an unfermentable reducing body, is present in glucose; and certain writers, some of whom who have not been investigators, have gone so far as to state that this body was wholly unassimilable, and not converted into material which could be utilized by the body. We have given special attention to this feature of the subject, for the purpose of throwing some light upon the nature of this body; and from the work done we have concluded, as stated in the conclusions, that it is a body which is one of a chain of products on the way from starch to glucose; that it is substantially the same body as is produced when diastase acts upon starch to make malt sugar; and that it is really of the nature of a dextrin, but has reducing properties. The amount in glucose which we have found, in the samples which we have examined, is about 8 per cent, when calculated as dextrose, or about 14 per cent when calculated as maltose. It probably should be considered that the amount present is more nearly what we have found in calculating it in the nature of maltose, because the body is more closely associated to maltose than to dextrose. We have found that by treating this product with suitable enzymes, the amount is materially, if not wholly, decreased; the amount is decreased to such an extent that very little, if any, is present; and when it is so changed, it is fermented by yeast. While we in our experiments find that at the end of fermentation tests there are certain small amounts of reducing bodies left, we have a reason to believe that instead of these being the original reducing substances which are present, they are other bodies which have been formed there in breaking down the dextrin, which is not of a reducing nature, into maltose and dextrose. The remainder of the material, after disposing of the dextrose and maltose and the reducing dextrins, is of the nature of ordinary dextrins, and is capable, of course, of being changed into sugars, and ultimately to dextrose; and consequently is assimilated, as dextrose is well recognized to be. I do not know that there is anything more.

Dr. Haines: Then, Professor Teller, putting it into a small volume, corn syrup, or commercial glucose, contains about how much water?

Prof. Teller: Approximately, I should say, 18 per cent of water.

Dr. Haines: Then the remainder is solids?

Prof. Teller: The remainder is solids.

Dr. Haines: Now, of the remaining solids, would you just summarize what you and Dr. Wesener have stated; will you

summarize as if you were giving a table? There is 18 per cent of water. Now, will you kindly construct a table?

Prof. Teller: A trace of organic matter; a fraction of one per cent, about 0.1—less than 0.1 of one per cent—of protein bodies, I should say; about 0.3 of one per cent of mineral matter; approximately 15 per cent of dextrose, varying with the nature of the sample.

Dr. Haines: Dextrose?

Prof. Teller: Dextrose. Approximately the same amount of maltose, varying with the nature of the sample; about the same amount of reducing dextrins, calculated as maltose; the remainder being about 30 per cent, I believe, of the nature of other dextrins.

Dr. Haines: Is that all, Professor?

Prof. Teller: That will be all of that, yes.

Dr. Haines: Now then, there will be some further questions on behalf of the commission that I should like to ask you later, Professor Teller—some general questions. But now, in regard to the composition of commercial glucose, are there any questions that my colleagues on the commission wish to ask? Commissioner Matthews, have you a question in regard to the composition?

Mr. Matthews: Doctor, as you well know, I am not familiar with the scientific part of this problem, and I have asked Dr. Klein, who is the analyst for the food department, to sit in the hearing here and ask any questions that might affect a decision either way. As you gentlemen all understand, I am by virtue of the law an ex-officio member of this commission, this Food Standards Commission; but, as I said before, I do not claim to be versed in the science in any way; and our analyst is supposed to understand these questions, so for my special benefit, to guide me in whatever decision I may come to, I want him to assist me in reaching that decision on the scientific part of the proposition. Therefore you will all understand that in a way Dr. Klein represents me on this commission, as far as these scientific questions are concerned.

Dr. Haines: Mr. Sullivan, are there any other questions from you?

Secy. Sullivan: Nothing just now.

Dr. Haines: Mr. Newman, have you any questions to ask?

Mr. Newman: No.

Dr. Haines: How about you, Dr. Klein? Have you any questions?

Dr. Klein: No.

Dr. Haines: Are there any present in the audience who wish to ask Dr. Wesener or Professor Teller any questions respecting the composition of commercial glucose? The question now is entirely upon the subject of the chemical composition of commercial glucose; and if there are any questions to be asked, you are quite at liberty to ask this witness anything upon the subject.

Mr. Moore: I would like to ask why you term it "commercial glucose," doctor?

Dr. Haines: Well, that is the name commercially used. I would refer you to Dr. Wagner, however, as more competent to pass on that than anyone else I know of.

Dr. Wagner: If I might answer that, I would simply say that there is a body known scientifically as glucose, which is not the product which is sold under the name of corn syrup; and that is where a great deal of this confusion comes from. The scientific product is known as d-glucose, and that represents purely the sugar itself, the dextrose sugar; whereas the commercial product is a mixture, as Dr. Wesener has just explained, of this sugar, plus dextrins, plus maltose.

Mr. Moore: A compound?

Dr. Wagner: Well, it is not a compound in that sense, no.

Dr. Haines: If there are no further questions to be asked regarding the chemical composition of this material, we can next go into the subject of its wholesomeness or unwholesomeness, its effects upon the economy. There are, as I said before, two sides to this matter. First, does it do any harm, positively or negatively; and second, what nutritive value, if any, has it? I should suggest that the first of these propositions be taken up first, although the two are very closely connected. Dr. Wagner, will you suggest anyone whom you would like, in your scheme, to present next?

Dr. Wagner: Dr. LeCount might recite his experiments as to the feeding of corn syrup, glucose, to rats.

Dr. Haines: As I understand it, Dr. LeCount, you and Dr. Hektoen and Dr. Carlson made a series of tests in feeding commercial glucose, corn syrup, to animals. Dr. Hektoen is not here, is unable to be here today to present that paper. I understand that he was the chairman, or at least, the man who planned this particular test. While he is unable to be present, you and Dr. Carlson are here. Will you

give us, perhaps, only a summary of your results? Then, as we have the complete papers, both in your brief and also in the Journal of the American Chemical Society, you might give us a summary of your results, stating briefly what you did, what the results were; and then there will be a number of questions that some of us perhaps would like to ask you and Dr. Carlson.

Dr. E. R. LeCount, produced as a witness before the commission, testified as follows:

My name is E. R. LeCount. I live at 6026 Kenwood avenue, Chicago. I did not bring with me a copy of the brief, Professor Haines, that you referred to, and consequently I am not able to state in a precise way the conclusions arrived at in that brief. But so far as my own personal connection with the experiments carried out is concerned, they consisted in making a gross and microscopic examination of white rats, the dead bodies of white rats, brought to me in all instances as unknowns, in this wise: I did not know which white rats had been fed glucose, or the products under question here; nor did I know which of the animals had been used as controls. I was shown by Dr. Hektoen the arrangements that he had made for the experiments. There was a large room, and the animals were divided into three groups. They were fed, he told me, bread made with various things—the subjects of experimentation—and with bread which did not contain those materials; the last animals being used as controls. These animals were brought to me designated by numbers, and I made post mortem examinations of them, and studied the microscopic structure of the various vital organs. Altogether about 50 white rats were examined in my investigation, and the reports of the examinations were made to Dr. Hektoen. That really ended my connection with the affair, because until the results were published I did not know to what extent the changes that I did find were concerned in the results that he did finally arrive at. I found in some of the white rats a disease or a diseased condition known as rat typhoid, a form of infection so called because of certain resemblances that it has to typhoid fever in human beings; and I later learned that this rat typhoid was in some degree epidemic amongst the animals, the subjects of experimentation, and that it was prevalent about the same in all of the different groups of animals. I should say that the lesions or changes due to this disease were found by me in perhaps one-third or one-fourth of the animals that I did examine. I found no other alterations that were due to disease at all. I examined such organs as the heart, lungs, kidneys, liver, pancreas, the various parts of the alimentary canal, the stomach and the bowel, the esophagus or gullet, and the generative organs. In many of the animals parts of the central nervous system were also examined. The examinations were made, as stated, grossly and microscopically; and for the latter purpose certain standard methods of staining were used that are more or less commonly used in all laboratories where work of this sort is carried on throughout the world. I think that is all I can state. If you care to have the conclusions of this report read, perhaps Dr. Carlson will read them.

Dr. Haines: I would like to ask Dr. Carlson if he happens to have with him a copy of his report, or paper, upon this subject?

Dr. Carlson: Yes. I have the report published in the Journal of the American Chemical Society.

Dr. Haines: Would you be good enough, doctor, to state what you did, and what the experiments consisted in? First, I wish you would state your name, residence, etc., for the record.

Dr. A. J. Carlson, produced as a witness before the commission, testified as follows:

My name is A. J. Carlson. My residence is 5228 Greenwood avenue. I am professor of physiology at the University of Chicago. The experiment was planned by Dr. Hektoen and myself, and consisted in feeding a group of rats as a control group on bread, another control group on bread plus a certain amount of cane sugar, and the experimental group on the same bread plus a certain amount of glucose—exclusively on this diet—for a period of about six months. These three groups then were followed in their rate of growth, their fecundity, and their resistance to disease as shown by the formation of immune bodies. The glucose-fed animals—that is, the animals which received the admixture of glucose, commercial glucose, to the bread—received daily $2\frac{1}{2}$ grams to $3\frac{1}{2}$ grams per kilo bodyweight per day for six months. This would be equivalent, if a similar experiment was carried out, a parallel test, on a group of persons weighing 50 kilos, and living 60 years, on the average, to a daily consumption of 150 to 200 grams of commercial glucose per day for ten years. The result can be stated in a few brief conclusions.

The addition of commercial glucose in the amounts of about $2\frac{1}{2}$ to $3\frac{1}{2}$ grams per kilo body-weight per day to the diet of white rats for a period of six months had no abnormal influence on the animals, either favorable or unfavorable—as determined by the rate of growth, fecundity, immunity reactions, and the condition of the organs—as just stated by Dr. LeCount. As both the glucose-fed and the control groups of rats were kept on a liberal diet during the observation period, the experiment does not show to what extent the commercial glucose was actually absorbed and oxidized; but in the quantities fed, the commercial glucose certainly had no injurious effects.

Dr. Haines: I would like, Dr. Carlson, to ask you, on behalf of the commission, representing them, a few questions later on, or I can ask you those questions at the present time, if it would be a matter of convenience for you.

Dr. Carlson: It would be for me, professor.

Dr. Haines: Very well. I think probably we have progressed sufficiently far enough now to ask the questions intelligently. Have you made a calculation, Dr. Carlson, as to the number of calories in commercial glucose on the dry basis, compared with those in cane sugar, taken as a representative sugar?

Dr. Carlson: I have not made calculations, but it is perfectly obvious that it is practically equivalent. There being no fats present, the trace of protein can be eliminated for the purpose of calories.

Dr. Haines: Then if the commercial glucose, corn syrup, were utilized by the system, the energy would be the same, practically the same, for this article as for cane sugar; do I understand that correctly?

Dr. Carlson: Yes, so far as heat or energy is concerned.

Dr. Haines: Yes, so far as energy is produced by those bodies.

Dr. Carlson: Yes.

Dr. Haines: Now, the second question I should like to ask you is this: Do you know, from those experiments, or from any other work that you have done, whether this material is utilized by the body, or is utilizable by the body? Dr. Wesener and Professor Teller have given us the composition of this material, and you unquestionably can tell us whether these bodies are utilizable by the human system.

Dr. Carlson: Well, no direct experiments have been made on man, to my knowledge, either by this group or at any time, showing the actual combustion of them in the human body. But on the basis of what is known of carbohydrate chemistry and physiology, we have no reason to suppose that the acid hydrolysis of starch is essentially any different from the enzyme hydrolysis of starch. Then Professor Woodyatt and his colleagues did some experiments on diabetic animals, showing that a very high percentage normally, I think 90 per cent or more, of this commercial glucose, when given to animals, was converted into blood sugar, and the blood sugar is largely oxidized. Dr. Wesener's experiments go in the same direction. On the basis of what is known in physiology and chemistry of carbohydrates, I consider it highly probable that it is entirely oxidized. But, as I said, experiments on man have not been made. They could be made, and very likely would show the conclusion that I have come to.

Dr. Haines: Would you repeat the last? We did not hear the last of what you said, Dr. Carlson.

Dr. Carlson: I said that the actual experiments on man have not been made, but they could easily be made, and they would very likely show the conclusion that I have come to, namely, that it was completely oxidized. That is to say, when I say "completely," it should be understood that it varies with individuals, and is a matter of the state of digestion. Not all the bread is digested, not all the starch of the bread; but, so far as any carbohydrate is concerned, I believe it would show that the oxidation is complete.

Dr. Haines: Comparing this article with cane sugar, which is the comparison usually made, and which will be the comparison, probably, that the commission will have to take chiefly into consideration, what should you say respecting the relative nutritive properties of corn syrup, commercial glucose, on the dry basis, compared with that of cane sugar?

Dr. Carlson: I should say substantially equivalent, with this proviso: where sugar is used as a flavoring, commercial glucose is not as sweet as cane sugar. The degree of sweetness is a factor in the comparative value of a certain food or certain foods to certain people, and therefore favors digestion, as against something less sweet; but that is a special condition, of course. On the basis of its composition, the nutritive value, I would say, is the same.

Dr. Haines: Dr. Carlson, would the superior sweetness of

cane sugar in some people who do not like very sweet articles have the opposite effect?

Dr. Carlson: It is entirely a matter of what we like. We can train that particular phase of our physiology to like almost anything.

Dr. Haines: Then it would be a thing that would work both ways?

Dr. Carlson: Yes. Some people like things very sweet, others like them bitter, etc. Now, when the system is attuned to a particular kind of reaction, if you get it that way, that favors the digestive processes.

Dr. Haines: Now, several questions have come before the commission, and on their behalf I would ask you these questions. As far as you know, if two animals, all other things being equal, were fed, the one exclusively on cane sugar and the other exclusively on corn syrup, the same amount in both cases, the corn syrup being estimated on the dry basis, which of the animals, as far as you know, would live the longer and flourish to a greater degree? Would there be a difference or not, in your opinion?

Dr. Carlson: Well, neither of them would flourish.

Dr. Haines: I am very glad to have you say that, Dr. Carlson. I should have included that in my question. Of course, we know perfectly well that on a single food like that no animal can flourish. Therefore, I am glad to have you introduce, as one of the elements of the question, the fact that neither would flourish, but while neither would flourish, which would flourish—

Dr. Carlson: The least?

Dr. Haines: —the least, if there is a difference?

Dr. Carlson: Well, I do not know of any such experiments, so my answer would have to be based on reasoning from general knowledge. I could not say whether the trace of protein in the glucose would be an acid, or not. If it is in the form of an amino acid, very likely—some of it, I believe, you found to be an ammonium, did you not, Dr. Wesener?

Dr. Wesener: Yes.

Dr. Carlson: Now, that amount of protein would, of course, be utilizable, and on that basis I should think the glucose-fed animal would, in all probability, live a little longer than the one fed on the pure cane sugar.

Dr. Haines: There are two other questions only, Dr. Carlson, that the commission asks me to ask. Is there a danger, from a physiological standpoint, that corn syrup, if given to man, would damage the person by overwhelming the cells, more than cane sugar? In other words, if an excess of cane sugar were given on the one hand, and an excess of corn syrup or commercial glucose on the other hand, would there be a greater danger in one than in the other of overwhelming the cells by excess of this material?

Dr. Carlson: As I understand the question, Dr. Haines, you do not ask me whether there is danger of the tissue cells being overwhelmed by an excess of carbohydrates as such, but whether the danger is greater from glucose than from cane sugar.

Dr. Haines: Yes, that is it exactly. It is purely a question of comparison.

Dr. Carlson: Of comparison, yes.

Dr. Haines: Of glucose with cane sugar; as they are the bodies that are compared largely in these questions of food products.

Dr. Carlson: Now, Professor Haines, that involves the question of what amounts would be taken of the two. If you take the abstract question, and you give 120 grams of glucose and 100 grams of cane sugar, the glucose there being 20 per cent water, the danger would be about equal, or the same for all practical purposes. Now, on the other hand, I can see that the question may come up in a different direction—the individual taking more of the glucose than of cane sugar. That is rather a question of habit and taste, and that question should not be answered by a scientist. I should say, as you put the question, that there is no practical difference that I can see between the two.

Dr. Haines: One further question, Dr. Carlson, and that is this: Are you acquainted with any work done by any reputable scientific men in any part of the world, throwing any light upon this subject, any work that indicates that commercial glucose is harmful—any work aside from that reported here—or any work indicating that it is harmless? First, as to the question of harmfulness: Do you know of any work done by scientific men in any part of the world which indicates that commercial glucose is harmful?

Dr. Carlson: Mr. Chairman, I do not. The only thing I know of is that instance over in England where impure glucose was used; and that undoubtedly is one of the factors

that has led to this general skepticism as to the safety of using glucose. I was going to ask Dr. Wesener myself from the floor whether the public can now be assured, on the basis of the processes of manufacture, that there is absolutely no possibility at all of arsenic or other poisons, by accident of manufacture, ever getting into the glucose. I believe that if the public, the consumers, could be assured of that, it would be a great step forward.

Dr. Haines: Laying aside the question of impurities—and I have assumed that the material is pure—you know of no work, doctor, done by anyone, anywhere, indicating that glucose is harmful?

Dr. Carlson: The only work I have ever seen of that character is the loose talk of various irresponsible individuals.

Dr. Haines: But by scientific men? My question was with regard to the conclusions of men of science?

Dr. Carlson: No, I do not.

Dr. Haines: One of my colleagues asks me to ask you, Dr. Carlson, this question: You stated a moment ago that if the proteid material in the commercial glucose was amino acid—I think you made that statement—

Dr. Carlson: Yes.

Dr. Haines: —it would be of value in the feeding and nutrition of animals. You asked the question of Dr. Wesener in respect to that. Do you know, or do you happen to know, whether that is an amino acid or not?

Dr. Carlson: Dr. Wesener informed me that it is in part amino acids.

Dr. Haines: And to the extent that it is amino acids, either wholly or in part, it is to that extent a substance adding nutritive value to the material?

Dr. Carlson: Yes, because so far as the physiological evidence goes as to acid hydrolysis of protein, even down to complete amino acid, such acids are capable of being utilized in nutrition.

Dr. Haines: Is there anything to be asked by you, Mr. Sullivan?

Secy. Sullivan: No.

Dr. Haines: Or by you, Mr. Newman?

Mr. Newman: I would like to ask what the effect would be if that proteid matter is not an amino acid?

Dr. Haines: Mr. Newman would like to ask: If that proteid matter is not an amino acid, what the effect would then be?

Dr. Carlson: Well, a part of it is ammonia, and so far as I know, the ammonia would be useless, practically useless to man, as such, taken into the food. At the same time, this is, of course, an extreme case. There is such a small amount of protein there, anyway. At the same time, it is an ammonia compound, and the bacteria in the alimentary tract may be capable of manufacturing proteins from the ammonia, proteins that would be utilized by the animal, as suggested by Professor Mendel in his work on nutrition a few years ago. Then nitrogen can be in glucose, of course, anywhere from the native proteins of the corn down to ammonia; and as far as I know of human and animal physiology, when introduced into the alimentary tract in any form except ammonia, it is utilizable directly. But, of course, I do not intend to give the impression that a trace of a single or even of two or three amino acids from some of the incomplete proteins of corn, could go very far in keeping up the vital processes.

Dr. Haines: Is there any other question that you would like to ask Dr. Carlson?

Dr. Klein: I would like to ask Professor Carlson this question: Is it not a fact that the works of Mendel, Osborn and McCollum show that there is more to assimilation and maintenance on proteins than the mere fact that you have a certain amount of ammoniacal nitrogen present? Must you not have a certain proportion of ammoniacal acid present; or, although you may have an abundance of other elements, will the animal not actually die if you have certain ammoniacal acids lacking?

Dr. Carlson: That is true.

Dr. Klein: Yes.

Dr. Carlson: For that reason physiologists are no longer speaking of food so much in terms of calories.

Dr. Klein: Is it not a further fact that the products of corn are highly deficient in certain amino acids which are necessary for growth, and that maintenance on these is impossible?

Dr. Carlson: Some of them are, yes.

Dr. Klein: Yes. So that could you, as an offhand statement, actually say, or would it be fair to say, that the small amount of nitrogenous material there would or would not be in any way an aid to the lengthening of life of an animal?

Is it not a highly problematical matter that could not be answered either way, except through experimentation?

Dr. Carlson: It is problematical, and it cannot be answered finally, except through experimentation. The experiments can easily be made. But I think you will admit, as a scientist, that so far as the protein is there in the glucose, so far as the amino acids are there, this protein is probably of more value, in the absence of all other proteins from the food. Now, of course, the work of Mendel, Osborn and McCollum takes up complex conditions. But here it is a question of relative maintenance on cane sugar, and on glucose containing a trace of protein.

Dr. Klein: The question, doctor, left the impression that the small amount of protein matter in glucose would be an asset to its food value, when, as a matter of fact, it may be a detriment because of its incompleteness. It does not follow, because you have amino acid present, that it is assimilable. As Mendel and Osborn have shown, you can feed an abundance, more than enough to maintain it on the nitrogenous level, and yet the animal will actually go down instead of maintaining itself.

Dr. Carlson: Yes, but the question here is the possible value of a trace of protein in the absence of all other protein food.

Dr. Klein: Yes. In view of the fact that we do not know the character of this protein matter in this respect in the glucose, is it fair to make any statement about it at all?

Dr. Carlson: Well, now, Dr. Klein, I think I remarked in connection with my original statement that this small amount of protein in glucose is really negligible for all practical purposes.

Dr. Klein: Yes?

Dr. Carlson: I did not wish to leave the impression, either in the record or in the mind of anyone here, that I placed very much stress on that trace of protein.

Dr. Haines: I think you made that perfectly clear, Dr. Carlson, absolutely clear; and therefore I do not think that question need be discussed any further. You made that statement twice, I believe, and I do not see how anybody could misunderstand it. Now, are there any other questions, Dr. Klein?

Dr. Klein: No, that is all.

Dr. Haines: Are there any other questions to be asked of Dr. Carlson by others?

Mr. Steele: I would like to ask the doctor, if the proportion of water in glucose is about 20 per cent over what it is in sugar, whether that would reduce its food value—not speaking of the wholesomeness, but the food value?

Dr. Carlson: Yes, it would, if you pay per pound just as much for glucose as for cane sugar. On the basis of the solids in glucose there is, of course, no material difference.

Mr. Steele: Well, the reason I take that up is this: For instance, if glucose is used in preserves in a certain amount, and a certain proportion of sugar is used, I wanted to know whether the glucose would have as much food value, used in the same proportion?

Dr. Carlson: Yes. If you in any given case use 120 grams of glucose or 100 grams of cane sugar, you would get the same food value, for all practical purposes.

Mr. Steele: But in order to do that you would have to reduce the proportion of the fruit, would you not, to make room for that, or would that be cooked out entirely? I do not know anything about the scientific end of this, and I am just trying to get enlightened on it.

Dr. Carlson: Well, no. I should say, in the case of glucose being used, you would reduce the amount of water added to the fruit by 20 per cent. This is merely a question of cooking, always bearing in mind that glucose contains only 80 per cent solid matter.

Mr. Steele: I am interested only in its use with preserves, and other matters of mixture.

Dr. Carlson: Now, do I get your question, Mr. Steele? Is your question that if glucose were used as a substitute for cane sugar, would the food value of the preserved fruit be less than if the cane sugar alone were used?

Mr. Steele: Yes, that is the question.

Dr. Carlson: Well, it is purely a question of the amount of water. That can be regulated by the quantity of glucose added. If any preserves are made by adding cane sugar to fruit, but no water, you cannot duplicate this preserve by adding glucose, without boiling off the water of the glucose, or boiling down the preserves.

Mr. Moore: Then the same quantity of glucose to start with, as the amount of sugar, would boil out 20 per cent;

and the material after the reduction of 20 per cent in moisture would have the same sweetness?

Dr. Carlson: No, it is not the same sweetness. Now, I have not been asked anything concerning sweetness, but just the food value on the basis of calories. On the basis of sweetness, that is another matter. That is a matter of individual taste. Glucose is not as sweet as cane sugar.

Mr. Moore: Well, is there a variance in the food value as there is a variance in the sweetness?

Dr. Carlson: Is there a variation in the food value in relation to sweetness?

Mr. Moore: Yes.

Dr. Carlson: Yes, but only insofar as sweetness is a palatable factor, and improves digestion; but not in the absolute calorific or nutritive value, no. After it is digested and goes into the blood it would not make any difference whether it tasted one way or the other.

Mr. Moore: The character of sweetness would not have a bearing on the value of the products for food purposes, for purposes of sustenance?

Dr. Carlson: Not for sustenance, except so far as it affects the psychic or nervous factors of digestion. I tried to make that clear in my answer to one of Dr. Haines' questions.

Mr. Steele: If you had fed these white rats on an equal proportion of glucose and of sugar, would they have shown the same development physically if you had made that test—or did you make such a test?

Dr. Carlson: Yes. There were three groups of rats. One group was fed on bread alone; the second group was fed on bread plus 2½ grams of cane sugar; and the third group was fed on bread plus the same quantity of glucose. The comparisons showed that there was no difference.

Mr. Steele: And all the other foods were in the same proportion?

Dr. Carlson: Oh, yes. They were fed the same amount of vegetables and bread. It was as perfectly fair a scientific test as could be made.

Mr. Steele: You spoke of their health; but I did not understand whether you had used the same proportion exactly of sugar that you used of glucose in making the test.

Dr. Carlson: Yes, the same proportion, figuring the glucose on the dry basis.

Dr. Haines: Pardon me a moment, doctor. One of the commission, who I believe was out when I asked that question of you, would like to be informed on that point; and, therefore, I will repeat that I asked of you a while ago. What is the effect of the sweetness of a substance upon the digestive processes? Does sweetness aid the digestive processes, or does it impair the digestive processes, so far only as the taste is concerned?

Dr. Carlson: Well, that is quite an important and difficult problem in physiology. It depends on the experience of the individual, to a certain extent. There is nothing in the sweetness that would in any way affect the chemistry of digestion, or the chemistry of absorption as such, but only insofar as sweetness is an agreeable thing. That puts the individual in a suitable frame of mind and body, and eliminates inhibitory phenomena, and then it leads to an additional amount of secretion of gastric use, when the sweetness is of a suitable degree. Now, that is a matter that varies for the species, and to a great extent for the individual, and is to be adjusted to the individual on a basis of past experience.

Mr. Newman: Doctor, you have done a great deal of work on the effect of flavor on digestion, have you not?

Dr. Carlson: Yes, some.

Mr. Newman: And that is just what this is.

Dr. Carlson: That is the problem.

Mr. Newman: Now, taking the general run of people, and the difference, the known or estimated difference between the sweetness of sugar and glucose, can you figure out at all whether there is a resulting difference in the digestion on that account, or the assimilation? Taking the general run of people, I mean?

Dr. Carlson: I could not state, as it depends partly on how much of either substance is used. Now, personally, if I may be entirely personal rather than scientific, when it comes to the question of sweetness of syrups or sugars, I do not go so much on the sweetness as I do on the flavor. Personally, I prefer the so-called maple syrup, if there is really any such thing on the market, to glucose—not because of the difference in sweetness, but because of the difference in flavor. And as with maple syrup, so it is with honey; there is a specific flavor in it. I do not think I can answer your question in any other way.

Mr. Newman: I was wondering if you could, from your experience with the general run of people, know what suits

them as to flavor in using sweetness—as to flavor there is a difference, I will admit—in that line?

Dr. Carlson: That would depend upon circumstances, and how the individual was brought up. If they start out in childhood on a certain substance—for example, the sweetness of cane sugar—and get used to it, that degree of sweetness would be sought, although not necessary for the maintenance of good health. I really could not answer the question in a more specific way.

Dr. Gudeman: I would like to ask Dr. Carlson what he considers the relative digestibility of starch, dextrose and sugar?

Dr. Carlson: Do you mean cane sugar?

Dr. Gudeman: Yes, cane sugar.

Dr. Carlson: Well, of course, with the cane sugar it is just a matter of inversion. I should say that in the general run of human beings there would be more carbohydrate passed in the feces when taken in the form of starch than when taken in the form of dextrose or cane sugar. Is that the point you mean?

Dr. Gudeman: Then, as I understand it, you would consider starch less digestible than dextrose or cane sugar?

Dr. Carlson: Yes.

Dr. Gudeman: Taken in the same amount?

Dr. Carlson: Yes. Less will probably be digested, taken in the same amount.

Dr. Haines: Dr. Carlson, pardon me. There was a noise outside during your answer to the latter part of that question. Would you kindly repeat it? The question, I believe, of Dr. Gudeman was which was the more digestible, starch, cane sugar or commercial glucose?

Dr. Gudeman: Dextrose—the relative digestibility in consumption between starch, dextrose and cane sugar.

Dr. Haines: Starch, dextrose and cane sugar. We lost a part of it, Dr. Carlson, on account of some noise outside. Will you kindly answer that question again?

Dr. Carlson: Well, the explanation is simply this: The further down in the hydrolysis process this substance has been carried when introduced into the mouth and stomach, the more likely it is to be completely absorbed before getting down to the large intestine and out in the feces. With starch, the digestibility of that will vary greatly, depending on the amount of cooking it is subjected to; and it will have the greater chance of partly escaping digestion and absorption. That would be my answer to Dr. Gudeman's question.

Dr. Klein: Did not Folin show, at the insane asylum where he was in Massachusetts, that an individual could take almost unlimited quantities of starch, and digest it wholly; that there was practically no limit to the amount of starch a person might eat, but was simply a question of whether he could keep it on his stomach as a continuous diet? He showed that a man will take as much starch as you can possibly feed him, and he will get away with all of it. That was Folin's first work at Massachusetts.

Dr. Gudeman: Mr. Chairman, my question was not based on the excessive amount of starch; but there may be a certain amount of starch consumed in the form of starch, and there may be a certain amount of dextrose and cane sugar consumed. I mean under normal conditions, which is the more digestible, starch, dextrose or cane sugar—in normal individuals, in normal quantities, under normal conditions? That was the point of my question.

Dr. Haines: I think that Dr. Klein's question is a very excellent one and Dr. Carlson, I am sure, can give us information regarding it. As I understand Dr. Klein's question, it is this: Whether, even though the amount of starch given is very large, very excessive—a condition not included in Dr. Gudeman's question—whether the starch will not still be digested? Was that not your question?

Dr. Klein: Yes. That was Folin's work.

Dr. Haines: Yes. We will be very glad to hear about that.

Dr. Carlson: That is an old fact, brought out in Dr. Folin's work. On the basis of the ordinary healthy individual, the ordinary amount of starch and the ordinary diet, I think it is estimated that 95 to 98 per cent of it is digested and absorbed almost completely. I would not admit that Folin or anybody else has shown that the digestibility of starch is practically unlimited, however.

Dr. Klein: They took enormous quantities, as much as they possibly could. I have forgotten the exact quantities, but it was over a pound, I think, at times, and they got away with all of it.

Dr. Carlson: Yes, but, of course, that is not an unlimited quantity.

Dr. Klein: Well, within the limits of a person's eating capacity—put it that way.

Dr. Carlson: As I recall those experiments, the starch was in the most favorable form.

Dr. Klein: Yes, certainly.

Dr. Carlson: You can give a half-baked potato, half-raw oatmeal and partly baked bread, such as you get sometimes, and that is an entirely different story.

Dr. Klein: It is a question of cooking, is it not?

Dr. Carlson: Yes.

Dr. Gudeman: Dr. Carlson stated in figures that possibly 98 per cent of the starch was digested. I asked my question as to the relative digestibility. I would like to have him give numerically what he considers the digestibility of dextrose and cane sugar.

Dr. Haines: Dextrose and cane sugar?

Dr. Gudeman: Yes. He gave 98 per cent as the digestibility of starch—approximately 98 per cent—if I understood him correctly. Now, what is the relative digestibility in normal quantities, of starch, compared with dextrose and cane sugar? That is the question.

Dr. Haines: In the normal diet?

Dr. Gudeman: In the normal diet.

Dr. Carlson: I do not think I could give you the figures. I do not know that any such figures are available. What would you consider the normal diet of cane sugar in ounces, for instance? How much cane sugar per day is the ordinary diet?

Dr. Gudeman: Would you consider starch more or less digestible than dextrose? Do you consider dextrose more or less digestible than cane sugar?

Dr. Carlson: I should put dextrose and cane sugar practically on the same basis.

Dr. Gudeman: How do they compare with starch?

Dr. Carlson: Starch is somewhat less completely used under the ordinary conditions of diet; but as a physiologist I do not think this difference is of any significance so far as the nutritive value of either of them is concerned. It is of no material importance, except for the work put on the digestive glands.

Dr. Haines: Has anyone else any question to ask regarding any of these matters? Dr. Carlson, if you can be here this afternoon, the commission would regard it as a favor, for we may wish to ask some further questions, or something may come up that we would like to ask you about. Now, the commission will be very glad to hear from Dr. Wells.

DR. H. G. WELLS,

produced as a witness before the commission, testified as follows:

My name is H. G. Wells. My address is 6025 Kimbark avenue.

Dr. Haines: Dr. Wells, you have sent to the commission a brief regarding the nutritive value of the subject under discussion, corn syrup, commercial glucose; and we shall be glad to have you either read that brief, or else without reading it give your views.

Dr. Wells: I have not the brief with me. Have you a copy of it here?

Dr. Haines: I think I have. Should you prefer reading it?

Dr. Wells: I am perfectly willing to read it, if you wish. I think it will undoubtedly serve as a basis for the questions.

Dr. Haines: Have you stated your profession, doctor?

Dr. Wells: My profession is asked for. By profession I am a physiologist, professor of pathology in the University of Chicago.

Dr. Haines: Doctor, you have given us your profession as that of professor of pathology in the University of Chicago. In order to qualify you upon some questions that you treat of in this paper, or brief, may I ask whether you have given any special attention to the subject of chemistry, in addition to special attention to pathology?

Dr. Wells: Yes. I have done chemical work for over 20 years, and have written a text-book on chemical pathology, as well as published original contributions on the subject. I prepared a brief on this matter as nearly as possible in language that might be understood by a layman, which may explain to the scientists present some of the statements contained in it.

"Starch constitutes one of the chief sources of heat and energy in the average human diet. In its natural form, raw starch, it is almost entirely incapable of use in the animal body, but before being utilized the large molecule must be broken down into smaller molecules by a process of hydrolytic cleavage, i. e., the taking of water into the molecule with subsequent splitting into two or more smaller molecules. In nature this is accomplished by enzymes, and the resulting products are chiefly dextrins and sugars. Starch taken into

the human body as food undergoes such a process before absorption, the chief product thus obtained and absorbed being dextrose, although certain intermediate products formed in the hydrolytic process may also be ascribed in small amounts.

"The action of enzymes in preparing starch for its use by the animal tissues is simply to hasten the speed of hydrolytic decomposition of the starch. If starch is merely suspended in water there occurs a hydrolytic decomposition, but only to an infinitesimal degree under ordinary conditions. If the starch-digesting enzymes of the salivary or pancreatic juices are present they merely hasten the rate of hydrolytic cleavage of the starch. The same effect can be produced by heating the starch suspension, and especially so if by means of pressure the boiling point of the water is raised considerably above 100 degrees C. Similar acceleration of starch cleavage can be obtained by the presence of acid in the solution. Whether the process is the natural one by digestive juices, or artificial by means of heating under pressure with water or with acid, the character of the change is fundamentally the same—in each case the starch molecule takes up molecules of water and breaks off into fragments, each containing a slightly larger proportion of water than the starch itself, and being more soluble. Whatever method is used, the starch yields sugars and intermediate products known as dextrin.

"All natural processes of digestion, not only of starch but also of protein and fats, are essentially the same—cleavage with addition of water. All can be accomplished by the natural digestive enzymes, or by heating under pressure with water, with or without the addition of acid. Many investigations of proteins have shown that the net results of digestion whether by pancreatin trypsin or hydrolysis by boiling with acids (even of considerable strength), are essentially identical.

"Consequently, if corn starch, whether containing a trace of protein or not, is subjected to heating under pressure with weak acids, the resulting products can only be looked upon as digestion products of starch. If these products are introduced into the stomach, they merely represent starch that has already undergone part of the changes that the digestive tract must necessarily bring about to make it utilizable by the tissues of the individual. Corn syrup is, therefore, partially predigested starch, and is of equal value and equal harmlessness with starch itself.

"The composition of corn syrup as determined by A. P. Bryant is entirely in harmony with the principle stated above. It consists essentially of dextrin and dextrose, which are shown to be the products obtained from starch that has been digested by saliva or pancreatic juice, and therefore the identical substances that the body always obtains from digestion of starchy food. When fed, the dextrose will be absorbed as it is, and be utilized completely for the production of heat and energy. The dextrin will be digested further into dextrose and absorbed as such. The traces of amino acids formed from the traces of protein present in the starch are also completely utilized by the human body without harm, being identical with the natural products obtained by digestion of protein foods in the intestine. The small amounts of inorganic salts present are absolutely harmless, and indeed desirable constituents of food. It is to be considered that the strength of acid used in the preparation of corn syrup from corn starch (0.2 to 0.25 per cent of the dry weight of starch) is very low, normal human gastric juice containing comparable quantities of acid.

"The absorption of dextrose from the alimentary canal takes place readily, and the blood containing the sugar passes to the liver, where the excess is largely converted into the insoluble glycogen and stored. The quantity of dextrose that can be cared for in this way by the liver is very large, and will not be exceeded by any ordinary amount that could be taken as food. If under exceptional circumstances a very great quantity of dextrose were introduced into the alimentary canal and absorbed, so that part escaped storage in the liver, no harm would result, for other tissues can store or burn the excess of sugar, and if too large an excess is present it flows off harmlessly through the kidneys.

"Repeated experience has shown that even in invalids not suffering from diabetes (in which case any form of sugar would be objectionable) much larger amounts of pure dextrose can be taken without harm than would ever be consumed in the diet, even if corn syrup were the chief sugar or syrup used. In corn syrup, furthermore, the large proportion of dextrin would make absorption slower than it would be with pure dextrose, for the dextrin would be largely hydrolyzed to dextrose before absorption.

"In an institution with which I am familiar, a series of

infants under careful observation received corn syrup as a source of carbohydrate food for a considerable period of time. Many of those children were of subnormal health for one reason or another, but no harmful effects were observed; on the contrary, the use of this predigested starch as a source of nourishment in digestive disturbances was found highly valuable.

"To summarize—Corn syrup represents a predigested starch, which furnishes to the human tissues exactly the same nourishment they would receive from starch introduced into the alimentary canal in ordinary starchy foods. It contains no demonstrable harmful substances, and there is no reason to believe that it contains unknown harmful substances when made from corn starch by hydrolyzing under pressure with weak hydrochloric acid. Although perhaps more rapidly absorbed than sugar formed in the stomach and intestines from starchy food, there is no reason to believe that this can cause harm even if corn syrup were taken in much larger quantities than it ordinarily would be."

Dr. Haines: Dr. Wells, I would like to ask you first about this use of corn syrup with children. Do you remember for what length of time the children have been fed on the corn syrup in that institution that you mention?

Dr. Wells: I cannot give you the accurate figures. I know for several months, though.

Dr. Haines: For several months?

Dr. Wells: Yes, long enough to convince the physician in charge of them that it was a very valuable food material for children, under those conditions of impaired ability to absorb foods.

Dr. Haines: Do you know why they used the corn syrup? Was it a question of something objectionable in other articles of food, or was it because this was a foodstuff of reasonable price?

Dr. Wells: I think the latter was the main reason. After having convinced themselves that there was nothing harmful in it, that it represented a partially digested natural food, and that it was obtainable in large quantities at a very low price, it was thought to be a beneficial and desirable foodstuff for such children, and was therefore used.

Dr. Haines: Do you happen to know whether the corn syrup is still used in that institution?

Dr. Wells: I cannot say. I have not asked lately.

Dr. Haines: Now, I should like to ask you one or two or three questions that the commission have requested me, as their spokesman, to ask of most of the scientific men present. First, do you know of any work done by reputable scientific men showing that this product which we are now discussing, corn syrup, commercial glucose, does have an injurious effect upon the system, positively or negatively?

Dr. Wells: I am familiar with no such work, except the observation already referred to by Dr. Carlson, of the impure product having caused arsenical neuritis in England; but I know of no scientific investigation of the pure glucose that indicates that it is in any way harmful.

Dr. Haines: The nutritional value, of course, was not included in that question. You have already expressed your views here, really, upon that subject, and I scarcely think I need to ask you again. You express the view in this brief that corn syrup, commercial glucose, is of nutritive value. Now, comparing it with cane sugar, on the dry basis, 20 per cent in corn syrup, what, in your opinion, would be the relative nutritive value of corn syrup, commercial glucose, and cane sugar?

Dr. Wells: For all practical purposes, the same. Theoretically, there is a slight difference. To the extent to which the sugar is hydrolyzed over to dextrose, it takes on water. Cane sugar, of course, takes on a molecule of water, to form two molecules of dextrose; so if you were weighing it out you would get a certain discrepancy in favor of the cane sugar, because it has the water added by natural process. On the other hand, there are some higher homologues, or some higher compounds, which have yet to have water added, so that probably it would about neutralize it. Therefore you would have to conduct an elaborate series of experiments to detect any difference, and the difference might be a fraction of 1 per cent one side or the other. It would probably not be more than that.

Dr. Haines: Then if in a food product you were on the one hand to use a certain amount of cane sugar, and on the other hand you were to use the equivalent quantity on the dry basis of corn syrup, would there or would there not be any difference in the food value of the two products obtained?

Dr. Wells: There would be no practical difference.

Dr. Haines: I believe those are the questions that I have

been requested by my colleagues on the commission to ask. I should like, however, to ask each one of the members whether there is any further question now to be asked.

Mr. Newman: I would suggest, Professor Haines, that you ask Dr. Wells the question with regard to harming the cells.

Dr. Haines: Mr. Newman suggests that I ask a question which I did omit, it is true. That question I did ask of Dr. Carlson. What is your view, Dr. Wells, upon this matter of harm done to the cells by corn syrup? Would there be a danger in using corn syrup that an excessive quantity entering the blood might injure the cells, flooding the cells, as we might say, more than with cane sugar?

Dr. Wells: According to Dr. Wesener's figures, I think about 15 per cent is dextrose, is it not?

Dr. Wesener: Yes.

Dr. Wells: That portion could be absorbed at once, without change. The rest would all require hydrolysis. Some would require the same amount of hydrolysis as cane sugar—that is, the maltose would—converting it into dextrose, the only form, practically, in which it is absorbed. The other portions, the dextrans, would require still further hydrolysis; so that I think, with a given quantity of cane sugar and a given quantity of corn syrup, that the total time of absorption for the dextrose would not vary much in the two cases, but would be nearly the same. There might be a little more dextrose get in a little quicker in the case of glucose, because there is some performed dextrose there. This amount, however, could never, in any amount that a person could take into his stomach and hold there, probably be enough to cause any harm. Under any conditions of food used, the question, I think, could be entirely eliminated. There would be no harm from such quantity.

Dr. Haines: Dr. Klein, have you any questions to address to Dr. Wells?

Dr. Klein: No.

Dr. Haines: Is there anyone in the audience who would like to ask Dr. Wells a question?

Dr. Cutler: Doctor, you spoke of feeding infants which came under your observation corn syrup. Suppose sugar, sucrose, could be had at the same price as corn syrup. Would they feed sugar to infants in preference to corn syrup?

Dr. Wells: All the work was done by other people, and I do not feel justified in answering a hypothetical question as to what they might or might not have done.

Dr. Cutler: Well, suppose sugar and corn syrup were of the same monetary value. Would you think it would be as wholesome and proper to feed sucrose to those infants, as to feed corn syrup?

Dr. Wells: I would not.

Dr. Cutler: May I ask why?

Dr. Wells: Because the corn syrup represents a mixture of dextrans in various stages, which would permit of a gradual digestion, a gradual absorption, through various steps. I would pay more for corn syrup for food for infants than I would for sugar. In fact, I would not give sugar, cane sugar, as the sole food to infants, under any conditions.

Dr. Cutler: Why not, may I ask, doctor?

Dr. Wells: Because it represents, first of all, a uniform single sugar, and would be absorbed in an abnormal way—that is, all at one time, at relatively one digestion, as compared to the others. Secondly, it is so very, very sweet that it would be obnoxious; that is another reason. In other words, the corn syrup gives us something more nearly what we would get with the digestion of starchy foods, natural foods, than cane sugar does.

Dr. Haines: Is there anyone else who would like to ask Dr. Wells any question?

Mr. Steele: I would like to ask you, doctor, what the fact would be as to a comparison of the sweetness, if the same amount of glucose were used and the same quantity of sugar, in preserves?

Dr. Wells: Please repeat that question. I did not get it.

Mr. Steele: I would like to know how the sweetness of the product would compare, if the same amount, figuring it on a solid basis, of glucose and sugar was used.

Dr. Wells: Cane sugar is much sweeter than glucose. Therefore we can give to infants much more glucose, much more corn syrup, as a source of food, than we can sugar. That applies to infants, or any individual. One cannot eat large quantities of cane sugar, except perhaps a high school girl.

Mr. Steele: That is what I was speaking of, not the health

value. It is simply a question of catering to the sweet tooth of the people.

Dr. Wells: Of course, people sometimes want their sweetness modified, or reduced.

Dr. Haines: Are there any other questions to be asked Dr. Wells? Commissioner Matthews, you have come in just recently, I think. Are there any questions you would like to ask?

Mr. Matthews: I do not think so. I think I understand him. The last question Dr. Cutler asked you was as to the relative value of glucose and cane sugar. I believe you said that you would prefer—or, you would consider the glucose of higher value than cane sugar?

Dr. Wells: In practical feeding, yes. Of course, you must remember that it is only an accessory to food. Sugar is only an accessory to food. As has been stated before, no one can live on sugar alone.

Mr. Matthews: Yes.

Dr. Wells: It is simply furnished as a certain part of the diet.

Mr. Matthews: But it is not as sweet.

Dr. Wells: The glucose is not so sweet. It would not pall on the appetite so soon, when used in a large proportion of the source of nourishment.

Mr. Matthews: And you would prefer glucose, as far as digestion is concerned?

Dr. Wells: Yes, for the purpose of feeding a child, or an adult, for that matter. If you had to limit your carbohydrates to cane sugar or glucose, you would find a person would get along much better on commercial glucose than on sugar, because he would get sick of the amount of sweetness that he would get with cane sugar as his sole source of carbohydrate food. That is why we eat bread, starch, and such things instead of cane sugar.

Dr. Haines: Is that all, gentlemen?

Mr. Moore: I would like to ask, Mr. Chairman, if we are to understand, then, that the quality of nutrition is independent of sweetness?

Dr. Wells: Yes.

Mr. Moore: And the matter of whether they would take cane sugar, or commercial syrup—corn syrup—would relate only to the matter of their developed taste?

Dr. Wells: As a matter of taste, yes. Each one will give, weight for weight, an equal number of calories.

Mr. Moore: And the benefit of glucose, corn syrup, over cane sugar is because of the predigested qualities of the corn syrup over the sugar?

Dr. Wells: Yes, and in a way its lack of sweetness in the same proportion of starch. We use much more starch in our bread instead of sugar, because we know by experience that we can eat enough starch; and the glucose, or commercial corn syrup, represents an intermediate stage between the two, and has some of the qualities of one, and some of the qualities of the other. However, the food value of both is, for all essential purposes, the same.

Dr. Haines: Are there any further questions to be asked of Dr. Wells? If not, I think we will adjourn the meeting until 1:45.

And thereupon a recess was taken until 1:45 o'clock p. m. of said date.

AFTERNOON SESSION.

Wednesday, June 21, 1916, 1:45 o'clock p. m.

Dr. Haines: Doctor Vaughn, I understand, wishes to get a train to Ann Arbor, and therefore we will call upon him next. Dr. Vaughn, I should like, if you will, for the purpose of identification in the record, to have you kindly state not merely your name, residence and occupation, but also some other facts about your work and your official positions, etc.; and we will ask the others who have testified today to do the same thing.

DR. VICTOR C. VAUGHN,

produced as a witness before the commission, testified as follows:

Mr. Chairman, and members of the commission: My name is Victor C. Vaughn. My residence is Ann Arbor. I am dean of the University of Michigan Medical School, and professor of physiological chemistry in that school. I have been teaching the subject of foods, their chemistry and uses in the University of Michigan for forty years, and have done some research and practical work along these lines. Dr. Hektoen asked me to make a general statement here concerning the use of commercial glucose as a food. I will be glad to answer any questions, but at present I will proceed to make this general statement: A man eats a great variety of foods, but there are five food principles, namely, water, inorganic salts, proteins, fats, and carbohydrates. We will leave

out of consideration for the present water and inorganic salts, as they have nothing to do with the subject under discussion today. Of proteins, the average workingman needs about four ounces of protein material, or 120 grams a day. Of fats he needs about two ounces, or 60 grams. Of carbohydrates, which are taken principally on account of their furnishing the body with energy, he needs about eighteen ounces, or about 540 grams. I will confine myself to the carbohydrates. It makes some difference as to the kind of carbohydrates that we use in our food. Naturally we take a variety of carbohydrates. The principal carbohydrates that we take in our food are unaltered starches and altered starches; and among the altered starches we have the dextrans and the different sugars. Sugars are divided into three classes, according to their chemical composition, and their physiological effects. We speak of mono-saccharides or relatively simple sugars, containing one group in the molecule; of di-saccharides, that contain two groups in the molecule; and poly-saccharides, containing more than two. The chief difference between these carbohydrates as groups depends upon the rapidity with which they are digested. Raw starches are made up of cellulose and granulose, arranged in alternate layers; and raw starches are slowly digested. Man has progressed above the brute creation largely—or partially, at least, in one respect—in cooking his carbohydrates as well as his other food. By the cooking of his carbohydrates he renders them more readily digested. We could not live exclusively upon already digested carbohydrates; at least, it would not be well for us. All carbohydrates, in becoming readily or completely digested, are converted into dextrose. Now, if we ate eighteen grams of dextrose, putting all of our carbohydrates in the form of dextrose, already digested, it would be likely to be too readily absorbed. All the carbohydrates after digestion are carried to the liver, and the excess of carbohydrates absorbed is converted into glycogen, which is still a carbohydrate, but is not so readily diffusible as dextrose. It is held in the liver, and is given out as the body needs it in the form of sugar—glucose. We could not take 18 grams of cane sugar very well; at least, it would not be best for us to take all of our carbohydrates in the form of cane sugar. In the first place, so large an amount of cane sugar would be irritating. It would lead to a catarrhal condition of the alimentary canal. Besides, 18 grams of cane sugar per day would be too sweet. Besides that, a third reason why it would not be well for us to take all of our carbohydrate in the form of cane sugar, is that some of the cane sugar, this substance being diffusible, might get into the circulation as cane sugar; and if it reaches the circulation as cane sugar, it could not be converted into glycogen in the liver, and would be harmful. For that reason we take mixed carbohydrates, more or less partially digested, and we could live and may live exclusively upon a mixed carbohydrate diet—unchanged starches, dextrans, maltose, and dextrose. We can live exclusively upon dextrans, maltose and dextrose—the dextrose being completely digested, and the maltose undergoing a very slight change, the di-saccharide compound being broken up into the simple sugar. The dextrans must be changed into maltose and then into dextrose before they are absorbed and eliminated. The matter of sweetness has some influence, as Dr. Carlson has said, upon the digestion, inasmuch as things that are pleasant to the taste increase the flow of the digestive secretion; but sweetness has no marked effect upon carbohydrate digestion, taking the matter as a large standard, because the mass of carbohydrates, the greater quantity of the carbohydrates that we eat, are not sweet. Sugars are not sweet, and dextrans are only slightly sweet, and commercial glucose, as you know, and as has been said here today, is much less sweet than cane sugar. We are to consider, then, in the study of carbohydrates as foods, the possible conversion of these carbohydrates into dextrose, and especially the question of the rapidity of the conversion; for it is not well to have carbohydrates that are too readily absorbed. The body would be flooded with them, and I suppose, besides, that we might ultimately lose our power of digesting carbohydrates if we took them exclusively in the form of predigested substances. Now, I am fairly well acquainted with the literature of this subject. I know of no one of scientific attainment who has ever found any fault with the use of commercial glucose. Commercial glucose is simply a partially digested starch. If it were completely digested, there would be an objection to it; but it is not sufficiently digested to make this an objection to its use. As some one said this morning, when the commercial manufacture of glucose from corn starch was first attempted, converting the corn starch into glucose by a very dilute mineral acid, the mineral acid at that time contained arsenic, might contain

arsenic and did sometimes contain arsenic, and the glucose that was formed in this way contained some arsenic. In Manchester, England, some twenty years ago, glucose thus manufactured was used in making beer or ale, and this was carried over into the product, and a great number of people were poisoned. Now, according to the analyses that Dr. Wesener made, and the analyses of others—my own included in the number—it is easy enough to get hydrochloric acid, even the American made hydrochloric acid, which is absolutely free from arsenic or other harmful substances. Some people have a prejudice against a substance or a food which is prepared by the action of a mineral acid. Now, the mineral acid which is used in the conversion of corn starch into glucose is scarcely stronger than—and it is the same mineral acid—is found in our own stomachs. It is simply using it outside of the body instead of using it inside of the body. That is all there is to it. The gastric juice contains about .2 of 1 per cent of hydrochloric acid, and the hydrochloric acid that is used in converting corn starch into glucose is no stronger than this. In fact, I think about .15 of 1 per cent is generally used. Sometimes it may go a little higher than this, up to .2 per cent, or even .225 per cent; but this amount is not objectionable. Another thing I want to point out right here is that the acid does not enter into composition with the starch. The acid simply acts as a catalyte, and it is water that enters into combination with the starch, and converts the starch into dextrin, maltose and glucose. I do not know whether I have made a concrete statement concerning this, or not. I feel that it would have been better, possibly, logically if Dr. Woodyatt had spoken before I did, but he will permit me to say that his experiments have shown that glucose, commercial glucose, is absorbed. He will explain the experiments himself; but the question of the absorption of glucose has been settled by Dr. Woodyatt's experiments. The experiments of Dr. Carlson, Dr. LeCount, and Dr. Hektoen were not made as experiments in the study of nutrition. They were made for the purpose of finding out whether there was in commercial glucose anything that was harmful. Now, if there are any questions, I shall be glad to answer them.

Dr. Haines: I would like, Dr. Vaughn, to ask you, on behalf of the commission, two or three questions similar to those I have asked all the others who have appeared. You have already answered one of the questions that I wish to ask, and that is regarding the wholesomeness or unwholesomeness of corn syrup, on account of its getting into the circulation too rapidly, and being poisonous to the cells, as compared with cane sugar. Most of these matters are in comparison with cane sugar, since they are the two that are used in the manufacture of most food products. I think you have answered that already, that in your opinion there would be more danger of overtaxing the tissues by the administration of cane sugar than by the administration of corn syrup.

Dr. Vaughn: There is no doubt about that, because cane sugar might be absorbed, if it was given in a very large amount, as cane sugar; and that would be harmful.

Dr. Haines: The second question that I would like to ask you, Dr. Vaughn, I think you have also replied to, and that is whether you know of any work done by men of science that indicates that commercial glucose is harmful to the system?

Dr. Vaughn: As I say, I am pretty well familiar with the literature of this subject, and the universal opinion of scientific men is that there is nothing harmful in commercial glucose, or corn starch changed by the action of very dilute mineral acid into what is known as commercial glucose.

Dr. Haines: Now, the third question which you have also inferentially answered, is: Which would be the more nutritious, a given weight of cane sugar, or the same amount of commercial glucose on a dry basis?

Dr. Vaughn: Figuring out the calories, they would be practically the same. There would be a slight calorific advantage in glucose, but it is so trifling that we might say that they are practically the same.

Dr. Haines: Than any quantity, as far as you know—an ounce, we will say, or 30 grams of cane sugar, if replaced by the same amount of commercial glucose on the dry basis, would show no difference in nutritive value?

Dr. Vaughn: Comparing either substance, there would be practically no difference.

Dr. Haines: I think there is only one other question that I should like to ask you at the present time, and this has also been asked before. Of course, we know that animals cannot live on sugar alone; but if two animals, other conditions being equal, were given, the one cane sugar and the other commercial glucose, of the same weight, on the dry basis, in your opinion which animal would suffer the most? They

would both suffer, we admit, but which would suffer the most?

Dr. Vaughn: I think that is a matter or a question which I might answer by general knowledge—that the cane sugar would be more harmful than commercial glucose. There would be little difference.

Dr. Haines: Have you any questions, Dr. Klein?

Dr. Klein: No, I think not, doctor.

Dr. Haines: Now, the general public is invited to ask Dr. Vaughn any questions that it desires.

Dr. Gudeman: Mr. Chairman, I would like to ask Dr. Vaughn the same question I asked Dr. Carlson this morning.

Dr. Haines: Surely, Dr. Gudeman. I am sure Dr. Vaughn will be glad to answer it.

Dr. Gudeman: Dr. Vaughn, what do you consider the relative digestibility of starch, dextrose and cane sugar—in a general way?

Dr. Vaughn: Starch would be digested more slowly than the others. It has to go through a greater length of process, more slowly than any of them. Raw starch would be digested more slowly than cooked starch; and the commercial glucose—

Dr. Gudeman: No, dextrose. I left out glucose.

Dr. Vaughn: Of course, if it is dextrose, it does not require any digestion; it is already digested, and would be absorbed. Cane sugar, of course, would simply require inversion. Have I answered it, doctor?

Dr. Gudeman: Yes.

Dr. Haines: Dr. Vaughn is a very big mine of valuable information, and therefore if anyone here wishes to become informed on any question on any subject connected with this question, I am sure he would be very glad to enlighten you. However, if there are no other questions to be asked, we will excuse Dr. Vaughn, although we are very sorry to have him go.

Dr. Cutler: Dr. Vaughn, just one suggestion. The question has just been asked: What becomes of the acid used in the hydrolysis of the starch in the manufacture of commercial glucose?

Dr. Vaughn: The acid is utilized, of course.

Dr. Cutler: By what means?

Dr. Vaughn: I suppose salts of lime. It is changed into common salt. It is not present in the glucose.

Dr. Haines: Dr. Vaughn, one of my colleagues has asked me to ask a final question, which will delay you but a moment. As to the effect upon intestinal indigestion, intestinal fermentation—what would be your opinion in regard to whether commercial glucose would have more or less effect than the other sugars, or starch?

Dr. Vaughn: Cane sugar certainly would irritate the intestine more than commercial glucose; and any irritation of the intestine causing a pouring out of the mucus, would feed bacteria, and would cause bacterial growth and inflammation in the intestine. Cane sugar is much more irritating, and for that reason it is not fed to infants.

Dr. Haines: Then you believe that cane sugar would favor intestinal indigestion more than the other forms?

Dr. Vaughn: It certainly would.

Dr. Haines: Now, we have a brief here from Dr. Woodyatt, who worked in collaboration with Dr. Sansome. Dr. Woodyatt is here, and I would like to call upon him to tell us what work he did, and the conclusions that he drew from it. Dr. Woodyatt, will you please give your name, residence and occupation, and also any qualifications that you have that may bear upon this point.

DR. R. T. WOODYATT,

produced as a witness before the commission, testified as follows:

My name is R. T. Woodyatt. My residence is Evanston, Illinois. My office address is 104 South Michigan avenue. I am director of the clinical laboratories of the Sprague Memorial Institute for clinical investigation. I am connected also with the faculty of Rush Medical College. During the past 12 years I have done some original work, particularly with reference to the behavior of sugars in the digestive tract and in the body. Dr. Hektoen, chairman of the Scientific Commission, put the problem up to me as follows: We were to ascertain, insofar as that might be possible, whether the preparation known as commercial glucose, or corn syrup, is as digestible and as assimilable as cane sugar; and whether, if used in the same manner as cane sugar in the food, it is any more likely to exert a harmful effect on the body. Our work had to do particularly with the digestibility and assimilability, for the question of toxicity or harmfulness was only touched upon indirectly. Before discussing the question of

digestibility and assimilability it might be well to state definitely exactly what we mean by those two terms. By "digestibility" of a substance we mean its conversion into a soluble form in which it may be absorbed from the alimentary tract. The digestibility is no measure of the value or the harmfulness of a food. A food which is too digestible, or too far digested already, may by the great concentration which it attains in the body do, as Dr. Vaughn has already stated, more harm in the bowel than if it were more slowly digested; whereas some of the relatively indigestible foods are valuable for that very reason. By "assimilability" we mean the ease with which the substance, after it has been absorbed into the body itself, becomes converted into a substance which is a normal constituent of the body. In the case of the carbohydrates, assimilation means specifically conversion in the body into d-glucose, or glycogen. Therefore, insofar as a substance is already d-glucose, it is assimilated, and requires no further assimilation. Insofar as it is d-glucose to begin with, as Dr. Vaughn has pointed out, it is capable of no further digestion. Now, the question comes up as to methods of detecting how much of a given substance, when administered by food, is digested, absorbed and assimilated. Those questions are all settled by ascertaining how much of a given substance is converted in the body into d-glucose or glycogen. The technic consists in administering to an animal a given quantity of food, and finding out how much of it becomes glucose, or d-glucose or glycogen, in the body; and this might be done in one of two ways. It might be done first by analyzing the body for its content of d-glucose and glycogen together; or, second, by making an animal a complete diabetic, in which case all of that which is d-glucose, or which is convertible into d-glucose, is lost in the urine, where it may be measured. We used the latter method. Dogs were made completely diabetic by the proper administration of the glucosid known as phloridzin, until they had lost in the urine all of the preformed carbohydrates which was there. Under those circumstances they excrete steadily in the urine, from hour to hour, a definite quantity of d-glucose. We then administer a known weight of the food to be studied, and after a lapse of from six to twelve hours, or any time necessary to get it all back, we find out what percentage of the food returns in the urine in the form of d-glucose, measuring this as the amount over and above that which was being excreted constantly in the urine before the food was administered. We gave as control doses to the phloridzinized dogs 10 to 16 grams of chemically pure d-glucose, crystalline, obtained from Kahlbaum. We then gave to the same dogs, about 12 hours later, an equivalent dose of commercial corn syrup, so measured with dry substance in it as to correspond to the weight of the dry d-glucose which had formerly been given. These experiments showed that when we gave a given weight of commercial corn syrup, on the average 80 per cent of it reappeared in the urine as pure d-glucose; whereas, if we gave the control dose of crystalline d-glucose, obtained from Kahlbaum, we got about one or two per cent more d-glucose back in the urine than we did from the corn syrup. All of the corn syrup which reappeared in the urine as d-glucose must have been digested, insofar as digestion was necessary. It must then have been absorbed, and finally it must have been assimilated; and since we got back in the urine about 96 per cent as much d-glucose from the corn syrup as we did from the pure d-glucose, we reached the conclusion that in the preparation known as commercial glucose, or corn syrup, bought on the open market, at least 96 per cent is as digestible, absorbable and assimilable as the same weight of chemically pure d-glucose. With reference to any other points, I will await your questions.

Dr. Haines: I would like to ask you, Dr. Woodyatt, the same questions that I have asked others, questions that my colleagues wish me to propound. First, in regard to the relative wholesomeness of commercial glucose and cane sugar: Will you express an opinion, Dr. Woodyatt, as to the relative wholesomeness of the same weight of cane sugar and commercial glucose?

Dr. Woodyatt: The only means we have of testing whether or not a given substance floods the organism is to find out the dose which may be administered by mouth, without causing the appearance of the unchanged substance in the urine. We have performed experiments with cane sugar and with commercial glucose. It is very much easier to give a dose of cane sugar sufficiently large to cause unchanged cane sugar to appear in the urine, than it is to obtain unchanged glucose in the urine after the administration of corn syrup. On the basis of those experiments, I would state that cane sugar is more likely to supersaturate the body when eaten as food, than commercial glucose is.

Dr. Haines: One of my colleagues asks me to ask you this question, referring to the experiments that you have described a few moments ago with dogs: In administering commercial glucose to the dogs, did you notice whether any untoward effects were produced; whether, in other words, the commercial glucose was toxic to the dogs?

Dr. Woodyatt: Dogs which had been robbed entirely of their carbohydrates by the creation of a complete diabetes, by this method are particularly susceptible to toxic factors of any sort. Notwithstanding this, we observed no toxic or deleterious effects in the dogs which received both d-glucose and commercial glucose, one way or the other.

Dr. Haines: Asking you the same questions as the others, are you familiar with any work by scientific men of standing which would indicate that commercial glucose is harmful?

Dr. Woodyatt: I would simply preface an answer to that question by stating that every food is injurious if misused; that d-glucose, if misused or misapplied, or used in undue quantities, is injurious, the same as every other food; but I know of no experiments or observations which would indicate that d-glucose, or that commercial corn syrup of the pure make, have any injurious effect which may not be ascribed to improper use of any particular syrup.

Dr. Haines: The other questions I think have really been answered by you, but almost perfunctorily I would ask again: What is the relative nutritive value of commercial glucose, compared with cane sugar, on the dry basis?

Dr. Woodyatt: Authorities on foods define foods as "material which, when taken into the body, may supply energy, and repair the normal wear and tear of the body." Therefore, foods fulfill many different functions. Basing the value of the food purely on its caloric or heat-producing qualities, the value of corn syrup, the dry substance, is practically the same as that of cane sugar, the differences being of theoretical interest only.

Dr. Haines: One of my colleagues asks whether there is any other function performed by cane sugar that commercial glucose does not perform: or, in other words, whether there is anything else we should consider, besides the caloric value.

Dr. Woodyatt: I think probably, when one recognizes, as has been brought out before, that no carbohydrate or any group of carbohydrates suffices for all the needs of the body, we will all admit that an individual cannot live indefinitely on any one carbohydrate. There are sugars which are not contained in d-glucose—I mean, in corn syrup—which meet certain requirements of the body. I am not aware that glucose and levulose, which are the two constituents in the cane sugar molecule, are any more advantageous even in this respect than corn syrup.

Dr. Haines: Therefore what would be your final word, Dr. Woodyatt, on the subject? Would the replacing of a given quantity of cane sugar by the same quantity, on the dry basis, of commercial glucose in a food, be harmful or not?

Dr. Woodyatt: Absolutely not.

Dr. Haines: Have you any other questions, Dr. Klein?

Dr. Klein: No, I have no other questions.

Dr. Haines: Does any of the audience wish to ask Dr. Woodyatt any questions? If you have any questions, or wish any information on the subject of sugars and their effect on the human economy, you have now an authority whom you may question. If there are no other questions to be asked, I think we may excuse Dr. Woodyatt. Now, some of the gentlemen who have given us their views earlier in the session during this morning's session, were not asked certain questions, because I thought better to postpone them until later, when we could better understand them. I therefore should like to return to Dr. Wesener, Professor Teller, Dr. LeCount and Dr. Carlson, and propound these questions to them.

Beginning with you, Dr. Wesener, I would like to ask you whether you know of any investigator of standing who claims to have shown that commercial glucose is unwholesome.

DR. JOHN A. WESENER,

having been previously produced as a witness before the commission, being recalled, further testified as follows:

In answer to your question, Dr. Haines, I will say that I do not, with the exception of the case reported in England, where a mineral acid had been used in making glucose, which was used, I think, in the manufacture of beer or ale, which contained arsenic; but this, of course, is an impurity in the finished product, and has nothing to do with the glucose. That is simply a matter of manufacture. As I understand it, and found it to be true in my analyses of glucose, I have not found any arsenic in glucose in any of the examinations I have ever made of glucose; and that represents a great many hundreds. Of course, the mineral acids which are used today

in the manufacture of glucose are absolutely free from arsenic.

Dr. Haines: Then let me ask you the other questions. First, what would be the relative nutritive value of a certain quantity of cane sugar, and the same weight of commercial glucose of the same value? What would be the nutritive value to a man?

Dr. Wesener: Well, I would say, from purely an energy and food standpoint, that they were equivalent. From the finical standpoint there might be considerable difference. Take an individual who is suffering from acidosis, and cane sugar would produce harm in him—that is, a large amount of cane sugar would produce harm; whereas glucose would not produce as much. I know that cane sugar was a poison to me, because I suffered considerably from hypochlorhydria, and I have had to be very careful about sugar—cane sugar; whereas glucose, or honey, which contain the true glucosid, do not produce those same effects. Cane sugar, as we know, is an irritant to mucous membrane, causing an excessive excretion of mucus. But speaking, as I say, purely from the standpoint of energy, they are equivalent—cane sugar, and the dry commercial glucose.

Dr. Haines: Will you please answer the question as to whether or not an animal would live longer on the one than on the other?

Dr. Wesener: I believe that an animal could exist longer—that is, from a tolerant standpoint—on commercial glucose than it would on cane sugar, for two reasons. In the first place, cane sugar, as I say, is an irritant—irritable—to a large extent; and secondly, some of it may not be inverted, and be absorbed as such, and go into the blood as such, and that certainly would be foreign to the blood, and would be eliminated by the kidneys. Insofar as cane sugar would be absorbed in that condition, it would be an irritant, of course.

Dr. Haines: The final question relates to the toxicity to the cells. Which, in your opinion, would be the more likely to cause damage by flooding the cells with foreign material, or rather, toxic material—cane sugar or commercial glucose?

Dr. Wesener: Well, if all of the cane sugar goes in as glucosin, and all of the commercial glucose goes in as glucosin finally, there would be no difference; but, as I have already answered in my previous answer to your previous question, if any cane sugar went in as such, as cane sugar, that, of course, would injure the cells; whereas that would not happen in the case of commercial glucose, for the reason that commercial glucose is composed of d-glucose, maltose and dextrin—the dextrin being there by more than 50 per cent of a total dry weight, and the maltose and glucose, or dextrose, being from 20 to 25 per cent each; and the dextrose, of course, would be absorbed, and the maltose would have to be inverted before it could be absorbed, and the dextrin would have to be converted into dextrose before it could be assimilated by the body.

Dr. Haines: Are there any other questions to be asked of Dr. Wesener upon this point? Dr. Klein, do you desire to ask any questions?

Dr. Klein: No, I have nothing to ask.

Dr. Wagner: I notice that while in the first part of Dr. Wesener's testimony he concerned himself entirely with the chemical subject, he has now gone over into the physiological feature of his investigation; and I do not know whether he has yet qualified in the record as regards his training for that.

Dr. Haines: I think the suggestion is a correct one, an appropriate one. I believe that the qualifications of each witness should be put in the record, and I think that Dr. Wesener did not qualify. He stated his name, residence and occupation. Dr. Wesener, in order to complete the record, would you kindly state what qualifications you possess entitling you to testify upon this subject of nutrition?

Dr. Wesener: I am a graduate in chemistry from the University of Michigan. I received my M. D. degree from the College of Physicians and Surgeons, Chicago. I have had the Chair of Chemistry in the medical department of the University of Illinois for about 12 years. I am now president of the Columbus Laboratories of Chicago, Illinois. I have spent considerable time and work on the subject of foods, with reference to their chemical composition, and their action on animals, as well as human beings. I have also examined foods as to their effect on the secretion of the gastric juice, and their effect on the human body generally, and also their effect as to certain changes brought about by certain foods, as would be determined by an examination of the urine.

Dr. Haines: Now, Dr. Carlson, I do not believe that we got your lineage entirely. We asked at that time your name, residence and occupation, and you stated that you were professor of physiology in the University of Chicago. Will you

kindly state, in order that the record may be complete, what work you have done, especially in connection with nutrition, and what papers you may have written, etc., and anything that throws any light upon your competency to give this testimony?

DR. A. J. CARLSON,

having been previously produced as a witness before the commission, being recalled, further testified as follows:

I took my doctor's degree in physiology from Leland Stanford University, in California. I have been connected with the department of physiology at the University of Chicago for twelve years. Before that time, and during that time, I have been giving my entire time to physiological investigation and teaching. During the last four years I have been doing considerable work on digestion, appetite, metabolism, and the whole gamut of the functions of the alimentary tract. I think probably that is all I can say.

Dr. Haines: How about papers, doctor, or publications?

Dr. Carlson: Well, during the 15 or 16 years that I have been in active scientific work I have published some 60 or 65 reports of research.

Dr. Haines: Professor Teller, I would like to ask, on behalf of my colleagues, the questions of you that I have asked of the others; but first, would you kindly state your qualifications? I believe that before you also gave only your name, etc.

PROF. G. L. TELLER,

having been previously produced as a witness before the commission, being recalled, further testified as follows:

I do not know that I gave my residence this morning. My residence is at Riverside, Illinois. My full name is G. L. Teller. I graduated from the Michigan Agricultural College in 1888. I was assistant chemist there for two years. I was for nine years chemist at the Agricultural Experiment Station of Arkansas, since which time I have been practicing chemistry in commercial laboratories in Chicago. I have never taken a doctor's degree, and do not know that I am qualified to answer some of the questions, especially those with regard to nutrition, that you have asked the others. Perhaps I had better not attempt to answer them, although I am perfectly familiar with the features that are involved in them.

Dr. Haines: There are two questions, Professor Teller, that I think you are competent to answer. The first one is: Are you acquainted with any work done by scientific men which throws any doubt upon the wholesomeness of commercial glucose when it is pure?

Prof. Teller: I am not familiar with any such experiments that have been made.

Dr. Haines: The second question also is: Have you made any calculations as to the calories in commercial glucose, as compared with those in cane sugar?

Prof. Teller: I have made such calculations, based upon the results of the composition of glucose, as have been determined in the experiments which are recorded in the paper of Dr. Wesener, the conclusions of which were given this morning by Dr. Wesener.

Dr. Haines: Do you remember what the relative calories are, in the same weight?

Prof. Teller: They are a trifle higher for glucose than for cane sugar, taking into account the fact that we have present d-glucose, maltose and dextrose, the relative caloric values of which increase from glucose to dextrin, and are somewhat higher for dextrin than for pure cane sugar, and equal for maltose, as to what they are for pure cane sugar.

Dr. Haines: Are there any other questions to be asked on these subjects? Thank you, Professor Teller. Now, Dr. LeCount, I believe, in order to go the rounds, we will now ask you to state what you did not give this morning, I believe—your academic or scientific history.

DR. E. R. LECOUNT,

having been previously produced as a witness before the commission, being recalled, further testified as follows:

I graduated in medicine in 1892 at Rush Medical College, and I have been teaching there ever since. I have spent about 24 years in the phase of medicine known as pathology. That has to do with the cause of disease, and the changes that are produced by disease. I have studied in Europe on two occasions, and in the Johns Hopkins Hospital Laboratories; and have been engaged in teaching and in research work practically all of that time. I have published, alone and with others, results of a number of studies; how many I do not know exactly.

Dr. Haines: There was one point in your statement of this morning, Dr. LeCount, that was not, I think, entirely clear to some of those present, because at the time you gave

your statement the experiments of feeding had not been related, and therefore I think that they were not able to understand some of your statements. Let me ask, therefore, now that the feeding experiments have been described—let me ask you again regarding your results. As I understand it, you examined pathologically the rats that were fed in three series—one series fed with food containing neither cane sugar nor commercial glucose; another series fed upon ordinary food containing cane sugar; and another series fed upon ordinary food containing commercial glucose. These animals were all brought to you numbered, but with no names, and no other memoranda attached. You examined them and found what differences, if any? I think that those who are present now will perhaps better understand the relation now than before. What differences did you find between the rats that were given the diet without sugar of any kind, except the natural percentage found in most food; and those given cane sugar in addition to their regular diet; and those given commercial glucose?

Dr. LeCount: Well, as I endeavored to state this morning, these animals were brought to me as what we call in laboratory work "unknowns." I knew nothing about what they had been given. I did not know to what group they did belong. The whole plan of the investigation was to determine whether in any of these experiments, harmful changes or harmful effects, or changes from the normal, could be observed in any of the groups of animals. Some were fed cane sugar, and some were fed the commercial glucose, or corn syrup, and some were not fed either of those things; but in all other respects the animals were fed alike. Now, I found no changes that were any different in any of the groups than were in any of the other groups, but I did not know the results of what I had found as regards the groups until the investigation was finished. As I also stated this morning, there was about the same amount of this epidemic that ran in the different groups of rats; and where those animals were found, they were excluded from the final results as I understand it.

Dr. Haines: I think in this morning's session you stated that the kidneys showed no differences in the different groups.

Dr. LeCount: Yes, sir.

Dr. Haines: And the heart as well. Did you examine, in this connection, the vessels?

Dr. LeCount: Yes.

Dr. Haines: The blood vessels?

Dr. LeCount: I examined the blood vessels—that is, the large blood vessels, like the aorta, and then the larger blood vessels as they were met with in the different organs. In all of the organs one meets in this sort of study with arteries and veins of medium size, both in the examination of the lungs, the heart, the bowels, the liver, the kidneys, etc.

Dr. Haines: And did you find that the blood vessels were affected in any of the three groups? If so, in which group?

Dr. LeCount: I found no changes in any of the blood vessels in any animals—nothing that could be termed disease.

Dr. Haines: Then in conclusion, doctor, I would like to ask you one more question: Do you know of any literature or otherwise that indicates that commercial glucose is capable of producing harm?

Dr. LeCount: I do not.

Dr. Haines: In your opinion, which would be the more nutritious, a given weight of cane sugar or the same weight, on the dry basis, of commercial glucose?

Dr. LeCount: I am not, of course, prepared to qualify as a physiological chemist, or as a physiologist; but just from the standpoint of medical general knowledge, I should say that the article mentioned that was not already carried to its final point in digestion, would be the more desirable as a food product.

Dr. Haines: And that in this case would be which?

Dr. LeCount: That in this case would be the commercial glucose.

Dr. Haines: Are there any other questions? One of my colleagues suggests this question, Dr. LeCount, which is similar to one I have already asked you, but somewhat different: In examining these bodies, did you find in any of them abnormal growths, abnormal developments, anything that was different in the one set from the other?

Dr. LeCount: I found no conditions, either as regards health or disease, which conditions were confined to any of the groups—group No. 1, group No. 2 or group No. 3. In some of the animals there were conditions that were not present in other animals, but they had to do simply with matters of nymphoid tissue, the presence of nymphoid tissue, which is a tissue like the tonsils are made out of. In some

of the animals it was a little more abundant in some places than it was in other animals, but this was not confined to any of the groups. It was distributed among the different groups.

Dr. Haines: So it was not connected with the diet?

Dr. LeCount: And had no bearing upon the results of the experiment, so far as I know.

Dr. Haines: Dr. Klein, have you any questions?

Dr. Klein: Yes, I would like to ask Dr. LeCount a question. You said, I believe, that a substance which was less digested—or, to put it the other way, which would require a greater degree of digestion, would be preferable to one which required a less transformation before absorption by the alimentary tract, did you not?

Dr. LeCount: I also prefaced my answer by the statement that, from matters of general medical knowledge, I believed that to be the fact.

Dr. Klein: Yes.

Dr. LeCount: And my answer is based upon what I know of the human body, and its customs and habits, with regard to foods in general.

Dr. Klein: Now, to what degree would you say the article of food should be in this undigested form, to make it a very desirable food?

Dr. LeCount: I would say only insofar as the body is capable of digesting certain foods.

Dr. Klein: Now between the two substances, such as glucose, and starch from which the glucose was derived, would you say that starch is more advantageous because it has to go through more stages before assimilated than is the case with glucose?

Dr. LeCount: I said in my judgment, and I believe, that glucose, if it was absorbed directly into the circulation, would be perhaps harmful; and I imagine that it would be more likely to be absorbed, as has been pointed out here by others.

Dr. Klein: No, that is not my point. I am talking about the difference between starch and glucose.

Dr. LeCount: Yes.

Dr. Klein: Which would be preferable, from the standpoint of the degrees or stages through which it must first be changed before being digested or absorbed?

Dr. LeCount: Well, I do not believe, generally speaking, that the human body is prepared to take care of food that is already prepared outside of the body for its nourishment.

Dr. Klein: No, I am not talking about that. I am talking about starch, which must go through more stages than glucose. Is that less desirable or more desirable than glucose?

Dr. LeCount: That is the only way in which I would care to answer your question, Dr. Klein, not being, as I have already stated, a physiological chemist, or a physiologist. But from the standpoint of a pathologist, I do not believe that the human body can do as well on foods that are already digested for the body, as it can to do a certain amount of digestion itself.

Dr. Klein: Well, the point I am trying to make is this: Would you compare relatively glucose and starch?

Dr. LeCount: No, I would not undertake to do that. That is a good deal like testifying in a criminal court, and having the lawyer ask you whether the gun was held 20 inches away, or only 16.

Dr. Klein: Well, why compare glucose and cane sugar, then? Is that a matter of 16 and 20 inches?

Dr. LeCount: Yes, I should imagine it was something like that.

Dr. Klein: Well, which is 16 and which is 20?

Dr. LeCount: I imagine that the glucose is more digested than cane sugar.

Dr. Klein: Is it not a fact that you have 15 or 16 per cent of dextrose all ready to be absorbed, in glucose?

Dr. LeCount: I suppose so.

Dr. Klein: That is, that is ready to be absorbed by the intestines?

Dr. LeCount: Yes.

Dr. Klein: Now, in cane sugar you have to first decompose that into levulose and dextrose, which requires work?

Dr. LeCount: Yes.

Dr. Klein: And which requires time?

Dr. LeCount: Yes.

Dr. Klein: Therefore, on that basis, your glucose would be more readily absorbed than cane sugar, would it not? Is that not a fact?

Dr. LeCount: Yes.

Dr. Klein: Well, does that not contradict your statement when you said that cane sugar requires less work?

Dr. LeCount: I was not aware that I made such a statement.

Dr. Klein: Yes, you said it would be more easily absorbed than glucose. I believe you made that statement, that cane sugar would be more easily absorbed.

Dr. LeCount: I understood, in answering the question at one time, that it had to do with commercial glucose.

Dr. Klein: Yes, I am talking about commercial glucose.

Dr. LeCount: And cane sugar.

Dr. Klein: Yes. You answered that cane sugar would be a detriment, because of its ease of absorption as compared with glucose.

Dr. LeCount: I do not believe that there would be any great material difference; but what difference there is, I have understood very largely from what I have heard here today, is in favor of the cane sugar being more completely carried along to the point where it is assimilable, than is the commercial glucose.

Dr. Klein: That is from no experiments; that is just simply from the testimony of the others that you have heard here today?

Dr. LeCount: Yes. It is because I am not a physiologist, nor a physiological chemist; but I am speaking from the standpoint of general medical knowledge.

Dr. Klein: That is all.

Dr. Haines: I presume I have inadvertently placed Dr. LeCount in a somewhat false position here. Dr. LeCount, as everyone knows, is the highest authority on pathology and pathological conditions as observed in the dead body; and, of course, as a physician, he knows a great deal about physiology. However, Dr. Carlson and Dr. Woodyatt are the real authorities upon this subject, and I think that if there is any doubt in the mind of anyone about those questions, they had better be addressed to them.

Dr. Klein: Well, the only point was that neither Dr. Woodyatt nor Dr. Carlson committed themselves on this point in the same way that Dr. LeCount did.

Dr. Haines: Perhaps Dr. Carlson and Dr. Woodyatt might answer Dr. Klein's question.

Dr. Carlson: Would you kindly repeat the question again?

Dr. Klein: I do not want to make much of it, but the point is that Dr. LeCount would leave the impression that between the use of cane sugar and the use of glucose, cane sugar was less to be desired because there was less change necessary before it was assimilated, than in ordinary glucose, commercial glucose—that is what I am speaking of; when, as a matter of fact, there is 15 per cent of directly assimilable dextrose right in ordinary glucose, which requires no further change before it is absorbed. I was simply asking for his authority or information on which he based the statement that cane sugar was less preferable. That was the only point.

Dr. Carlson: Well, I think you know as well as any of us, Dr. Klein, that the question is complicated.

Dr. Klein: Yes, decidedly; and therefore I think it is unfair to ask it, and very difficult to answer it.

Dr. Carlson: It is.

Dr. Klein: Decidedly.

Dr. LeCount: Then why did you ask such a question of a pathologist?

Dr. Klein: I did not ask it. Dr. Haines asked the question and I did not think that the answer was warranted.

Dr. Haines: Oh, I beg your pardon, Dr. Klein. I did not ask that question. I asked the question as to which would be the more nutritious.

Dr. Klein: Yes.

Dr. Haines: But I asked no question like that.

Dr. Klein: And Dr. LeCount answered that glucose would be, and not sugar; and I was simply trying to get his reason for the statement, that was all.

Dr. Carlson: The complication there is this, that in glucose there are at least three different kinds of substances, and probably more. It is true that we have a small per cent of dextrose already in the glucose which goes right through without digestion; but by far the greater amount of the commercial glucose has to undergo more digestion than cane sugar.

Dr. Klein: Dr. Carlson, do you know of any experiments where they have actually figured out the work of digestion, or demonstrated the work necessary to digest maltose and cane sugar? Do you know of any published work on that?

Dr. Carlson: No. I think you are now coming into a field which has no bearing on this question before us. After all, the question before us, as I understand it, is the question of public health. I have for some years been seriously interested in the question of public health; and the question of a greater or less use of glucose in food is, after all, a question of public health, is it not? Now, the question of the precise work involved in the conversion of cane sugar, or in the digestion of glucose, would not amount to a snap of the finger.

Dr. Klein: I quite agree with you, but—

Dr. Carlson: Because, so far as digestive juices are concerned, so far as the capacity of the alimentary tract to care for the food in the ordinary normal individual is concerned, we have much more of it there than we ordinarily use.

Dr. Klein: Yes.

Dr. Carlson: The factors there are something tremendous.

Dr. Klein: But the point has been that each of you has been asked the question, with more or less emphasis; and it seems to me that we have gone quite astray from any experimental basis into the realm of hypothesis and mere assumption, being given a problematical condition of which would maintain an animal on a starvation basis, a pure carbohydrate diet of glucose, or cane sugar; I think we have no such experiments to warrant us in saying either one thing or the other.

Dr. Woodyatt: Yes, we have such experiments.

Dr. Klein: Are they published?

Dr. Woodyatt: Yes.

Dr. Klein: Which ones?

Dr. Woodyatt: When we get through, I will give you the definite ones that bear directly on that point.

Dr. Klein: Yes. I would like to know them.

Dr. Carlson: I would simply like to make the statement, before I sit down, that in my answers to all of the questions, as well as in the brief statement of the result of the research, I certainly have not been biased.

Dr. Klein: No, you have not, and there was no imputation of that.

Dr. Carlson: Absolutely not. If I personally have any bias anywhere, it is to take the public's side of the question of public health.

Dr. Klein: I know that absolutely, because we sit in the same committee, so far as that is concerned.

Dr. Haines: Now, Dr. Woodyatt, you stated a moment ago that you had data, experimental data, I believe, or that you knew of experimental data, upon these questions. Will you be good enough to state them?

Dr. Woodyatt: I think the lack of clarity that arises, and the apparent discrepancy in these statements, is due to lack of consideration of this point: Digestion means, as stated, the conversion of a substance into a form in which it is most appropriate for absorption, most suitable for absorption. That is the end of digestion. Absorption is another process. Now, when cane sugar is taken into the body in certain concentrations, it may be absorbed without undergoing any further digestion; it may be absorbed as cane sugar, or, if it is digested, it represents a mixture of glucose and levulose, two individual sugars, only one of which is equivalent to glucose. Therefore, even if cane sugar were digested, it would not yield full glucose, and be strictly comparable to it, but it would be half glucose and half levulose. Now, the question as to whether cane sugar might be more injurious on account of its inherent properties when taken in large concentration into the bowel, resolves itself into a question of whether, if it were absorbed unchanged, or having been digested, it would create a concentration of glucose and levulose which would be less easily assimilable, after it got into the body, than an even larger concentration of glucose, as such, in the bowel. That brings the question back to experiments of what happens when you introduce cane sugar glucose and levulose directly into the blood stream, without considering the question of digestibility or absorbability. When you inject glucose into a vein directly, it manifests all the characteristics of a substance which is taken up in large amounts directly as it is, without any process of digestion; that is, you can introduce constantly into a vein .8 grams of glucose per kilogram of bodyweight per hour of time, which is sufficient to yield in an average man weighing 150 pounds, upwards of 6,000 calories, which is the amount of energy necessary for a man doing severe work in the trenches. On the other hand, if you inject levulose into a vein at that rate, you can only introduce it at about 1/16 the rate before some unchanged levulose will appear in the urine, because that rate at which levulose is converted over into glucose by the assimilating processes of the body is slower, and requires time. If you inject cane sugar directly into a vein, it is practically not utilized whatsoever. Therefore, even though in the corn syrup you may have 10 or 15 per cent of free glucose, that can be taken in at a very rapid rate, and still assimilated, whereas, if you had a much smaller concentration of unchanged cane sugar, with a smaller concentration of levulose, those might be absorbed, and still they might fail of utilization quicker, and therefore subject the cells to a higher concentration of those sugars than you would get of glucose, and the glucose might be quite different. As a matter of fact, these little temporary floodings of the body

with either cane sugar, levulose or glucose do not do any harm. We have demonstrated that.

Dr. Klein: That is just the point I wanted to bring out. How much cane sugar can a person inject at any time without an appreciable amount of cane sugar appearing as such in the blood stream?

Dr. Woodyatt: If you give a fasting man, the first thing in the morning, on an empty stomach, about 50 grams of cane sugar, some of it will appear in the urine in a certain percentage of cases; but individuals differ very greatly, depending on the rate at which they absorb the stuff. As a rule, you can give a considerably higher quantity of corn syrup without producing any unchanged sugar in the urine.

Dr. Klein: But in the ordinary processes of nutrition in people, what is the likelihood of having any considerable proportion of cane sugar appear unchanged in the blood stream?

Dr. Woodyatt: As I say, the thing is entirely beside the point. The actual occurrence of these things, except under experimental conditions, rarely happens with either cane sugar or glucose.

Dr. Klein: Yes, and that is why I think it is unfortunate that the whole thing has ever been brought up in the discussion, because it is an experimental condition, and it is not anything that affects public health one way or the other, in the ordinary course of nutrition.

Dr. Woodyatt: The question was asked as to which one would have a greater tendency to flood the cells, glucose or sugar; and the answer was that the cane sugar would be somewhat more likely to do so; and that is quite correct. We have all stated the same thing.

Dr. Haines: This discussion has certainly been very interesting, and has brought out many points of value. Is there anyone else here who wishes to be heard on any subject connected with the scientific aspect of this case? We shall be glad to hear from anyone. Today is the day for the scientific consideration, consideration of the scientific side of the question. We shall be glad to hear from anyone present.

Dr. LeCount: Just out of pure curiosity, I would like to ask this: Dr. Klein this morning mentioned Folin's experiments in Massachusetts at one time, in connection with feeding large amounts of starch. What was his object in doing that, may I ask?

Dr. Klein: That was in order to determine the so-called endogenous or exogenous metabolism. That was the first experiment done on the limited conditions of nitrogenous excretion, especially with reference to creating creatin. He was feeding a ration free from nitrogen, to see the minimum amount of nitrogen that was excreted daily. That was the work, by the way, which got him the Chair of Physiological Chemistry at Harvard. That was his first work on that subject.

Dr. Carlson: Mr. Chairman, I have a question in mind that I presume will come up tomorrow, when I very likely will not be here; so I should like to ask it now, because I feel that it is a very important question in connection with glucose and the public health. The question is: Are manufacturers in a position to say absolutely that under no conditions, henceforth, will there be such an experience repeated as that in England, in the way of poisons introduced into the product in the course of manufacture? I feel that if we could be sure of that, the other questions are perfectly clear. I suppose perhaps that question is out of order now, though, Mr. Chairman.

Dr. Haines: No, Dr. Carlson. I think it is very appropriately introduced, and I am glad, very glad, that you suggested it. Of course, there are representatives here of the manufacturing industries. I know that Dr. Wagner can undoubtedly answer that question, and Dr. Cutler also. We should all be glad to hear what they have to say upon that subject.

Dr. Wagner: Mr. Chairman: As regards the safety of corn syrup to the consumer, I would say, in the first place, that there has never been any question about the purity and the freedom from arsenic of American glucose, American made glucose. When this unfortunate occurrence transpired in England in 1898 or 1899—and that is the only case of its kind on record, by the way—the United States Government immediately ordered a searching investigation. Dr. Wiley later on reported upon the hundreds of samples of commercial glucose that he had examined from all parts of the country, in all the markets; and in not one instance was there any quantity of arsenic found. We have the same safety in respect to glucose that we have in respect to any other food product. Glucose is by no means the only food product made by the use of mineral acid. Take baking powders, molasses, and fruit syrups; they are made with much larger quantities of acid than corn syrup; and a good many of them are made with other acids than hydrochloric acid, such as sulphuric

acid, in which, of course, if there were any arsenic present, it would be in larger quantities.

Dr. Haines: Dr. Wagner, our stenographer cannot hear you.

Dr. Wagner: I say, in the manufacture of these other articles of food, other acids than hydrochloric acid are used. The phosphates and fruit syrups, which are consumed in large quantities are obtained by the use of mineral acids; and while I am not prepared to give you a complete list, I think I could continue the list almost ad infinitum. There are so many food products made by the use of acids that you cannot really attempt to enumerate them all on the spur of the moment. In addition to that, of course, it goes without saying that the inspection carried on in the factories is the greatest insurance that we have got. If I may say it in connection with corn syrup, I think it might be of interest to recite the system of inspection that we employ in our business. Since I inaugurated that system many years ago, some 18 or 19 years ago, I think I speak with some authority upon the subject. Ever since this trouble occurred in England—and that, by the way, incidentally, was not glucose, but was a solid sugar; that is a misstatement that has gotten into the public records—we have insisted upon the manufacturer sending us a sample of each tank car of acid going to our factories; and that was tested at our general laboratories, and the manufacturer was not allowed to ship that car, and let that car go forward, until it had been released by the chemist of the general laboratories. Then the car would be forwarded, and it was then subject to a second test upon delivery at the factory; and only then was the car accepted. Now, I think there is less danger in that respect than in many food products which are widely consumed. We have had trouble with meat; you all remember the story of what occurred at the time of the Spanish-American war. Nevertheless, no one today would condemn meat, as such, because that unfortunate trouble occurred. We have had ptomaine poisoning, and we have had other unfortunate occurrences, but no one with any degree of fairness would condemn all food products just because something of that sort occurred at one time. I want to close my remarks with this statement, that the searching investigation conducted by the United States Department of Agriculture failed to disclose the presence, in any single sample of American made corn syrup, any determinable quantity of arsenic.

Dr. Haines: Does anyone wish to ask a question?

Mr. Miller: Yes, I wish to ask Dr. Wagner just one question.

Dr. Haines: Yes, surely. Anyone wishing to ask any questions will be invited to do so.

Mr. Miller: My name is J. D. Miller, and I am general counsel for Sprague, Warner & Company. I want to ask Dr. Wagner whether he is speaking with reference to the manufacture of glucose for all of the manufacturers, or only for the Corn Products Refining Company?

Dr. Wagner: Inasmuch as the manufacturers of corn syrup are members of the American Manufacturers Association of Products from Corn, I am speaking for the manufacturers as a class, and not for any one particular company. We take up in our meetings our methods of checking up just such things as this, and others, too; and in that way the members are employing the same system, so far as possible, in their works. Besides that, the source of supply of acid—and that is a very important matter—is the same with all the manufacturers engaged in manufacturing corn syrup.

Mr. Miller: Mr. Chairman, are you and Dr. Wagner familiar with the processes used by all of the glucose manufacturers?

Dr. Wagner: I am, sir.

Mr. Miller: How many glucose manufacturers are there?

Dr. Wagner: I do not know exactly, but about, I should say, five to seven large firms.

Mr. Miller: How many do you say?

Dr. Wagner: From five to seven firms. It is a very small number. It is a very concentrated industry. It is not like the wholesale grocery business, where there are as many grocers as there are windows in an office building. There are just a few, and they are to be easily controlled in that way.

Mr. Miller: Who are the manufacturers of glucose?

Dr. Wagner: The Corn Products Refining Company, the Clinton Sugar Refining Company, the Union Sugar Refining Company, Huebinger Brothers, and the American Maize Products Company. That is all.

Dr. Haines: Dr. Wagner, may I ask how many of those operate in Illinois?

Dr. Wagner: The Corn Products Refining Company operates two factories in Illinois—no, three factories.

Dr. Haines: Do any of the others named operate in this state?

Dr. Wagner: No, I do not think so. The Corn Products Refining Company operates three factories in this state.

Dr. Haines: And is that the only company operating in this state?

Dr. Wagner: And they have two in Iowa, and two in Indiana.

Dr. Haines: Are there any others who wish to ask questions?

Mr. Steele: But with that situation, doctor, is there not the possibility that later on more manufacturers will come into that field, that you could not control, or could not say what their process of manufacture would be?

Dr. Wagner: Mr. Steele, my answer to that would be this, that the present factories are the training schools for the future factories which you seem to have in mind. Inasmuch as any organization requires a personnel, that personnel would come from our factories, would be recruited from our factories; and therefore it is most likely to assume that the same methods used in our business would be used in that future business.

Mr. Steele: What I am getting at is this: If this is allowed to go through, and there happens to be a lot of other people who want to go into that business, and there would be an opportunity for them to do so, the question is how much about it they will know when they go into it.

Dr. Wagner: I must confess I do not know the proposition to which you are referring, Mr. Steele, because I have not heard of any proposition such as that made before this meeting.

Mr. Steele: Well, that is what the meeting is called for.

Dr. Wagner: The wholesomeness of corn syrup is the subject before this meeting; and, Mr. Chairman, if I am wrong, I would like to be corrected.

Dr. Haines: That is the topic of discussion before this meeting.

Dr. Gudeman: Sulphuric acid is used today in the manufacture of corn syrup in the United States, is it not?

Dr. Wagner: None whatsoever.

Dr. Gudeman: How much sulphuric acid is used in the manufacture of muriatic acid, the muriatic acid that is used to manufacture corn syrup, that is obtained from pyrites?

Dr. Wagner: I am very glad you brought that out. I ought to say this: The presence of arsenic in the English-made sugar was due to the employment by the acid manufacturers of a lot of pyrites that had been imported into England from Spain, and that contained a much larger amount of arsenic than was usually the case, and it very likely escaped the attention of the people in charge. Now, since the opening up of the sulphur beds in Louisiana, the sulphuric acid produced in this country is obtained primarily from that sulphur, and that sulphur is absolutely free from arsenic. The general purity of the brimstone is about 99.7 to 99.9, as taken from the earth, from the ground.

Dr. Gudeman: How much arsenic does it contain, on the average?

Dr. Wagner: The Louisiana brimstone?

Dr. Gudeman: Yes.

Dr. Wagner: It is free from arsenic, absolutely free from arsenic. That is the source of supply. And, by the way, since a good many matters now come back to my mind, Dr. Gudeman, I am very glad and indebted to you for bringing them to my attention. As a matter of fact, in our contracts it is specified that the muriatic acid must be made from brimstone sulphuric acid. I am very much obliged to you, Dr. Gudeman.

Dr. Haines: Are there any other questions to be asked of Dr. Wagner?

Dr. Wells: How much sulphuric acid in the American product is made from pyrites?

Dr. Wagner: How much of it?

Dr. Wells: Yes.

Dr. Wagner: Well, I do not know as there are any statistics available, because the sulphuric acid produced in this country during the last two years has greatly exceeded the previous production; and, of course, this excess production was brought about by the heavy demands made, so that it is practically impossible at this moment to give any estimate, even. But from what I know from my direct connection, my acquaintance with the men in charge of the Union Sulphur Company, who furnish this brimstone sulphur, and from the increase in their business during the last year, I can give you their figures. They mined and sold 500,000 tons of brimstone in 1915. Judging from that information, I should say that

the sulphuric acid in this country today is made practically from brimstone and only a very small amount from pyrites.

Dr. Wells: So that if other people went into the business of making this sort of material—glucose—they would of necessity now have to use an arsenic-free sulphuric acid—a muriatic acid derived from free sulphuric acid—I mean, on the American market?

Dr. Wagner: The chances are they would have to hunt for an arsenic containing sulphuric acid—the other way around.

Dr. Haines: Are there any further questions to be asked of Dr. Wagner? If not, we will thank Dr. Wagner for the information given us. Dr. Cutler, have you some information?

Dr. Cutler: I think I can add nothing to what Dr. Wagner has said. There is no greater authority than Dr. Wagner on the matter of the manufacture of corn syrup, and what he says to you is the last word. He knows more about it than almost anybody else. He is quite right when he says, however, that the American Manufacturers' Association of Products from Corn are united in their effort to have a pure product, a product which is absolutely wholesome.

Dr. Haines: Are there any questions to be asked of Dr. Cutler? Has anyone else any questions to ask, or comments to make, or information to furnish?

Dr. Wagner: I was requested this morning to put into the record this retraction in the New York Globe.

Dr. Haines: And you will do so?

Dr. Wagner: The first item, to which I referred this morning, appeared in the Globe and Commercial Advertiser of New York, of Thursday, August 12, 1915. That is less than one year ago. In big scare lines it says, "Glucose Killer of Men, Declare Doctors of Rockefeller Institute." This is by Alfred McCann. The first words are: "The glucose devil has been located at last." Well, on September 2, three weeks later, appeared on the editorial page of the Globe and Commercial Advertiser this editorial statement, which I will read:

"A Correction. In the Globe of August 12 appeared an article by Mr. McCann, discussing a published report alleging that Drs. Meltzer and Kleiner, of the Rockefeller Institute, had found dextrose to be a cause of diabetes. That report was without foundation. Doctors Meltzer and Kleiner had announced no such findings, and the paper they published describing certain experiments regarding the action of the pancreas on dextrose, did not reflect in any way on corn syrup or other food products of corn. Mr. McCann wrote as he did in reliance upon a published report of experiments conducted by the Rockefeller Institute, which he subsequently found to be erroneous. In another column of this issue will be found his explanation. Needless to say, the Globe regrets that it gave currency to a misleading report, and publishes this correction in the hope that any wrong impression created in the public mind may be removed."

Now, then, on page 6 of the same issue appears the retraction, in the same type that was used in the original article. The retraction by Alfred McCann over his signature reads: "Rockefeller doctors have not condemned glucose or corn syrup." I do not wish to burden the record by reading all of this.

Dr. Haines: But you may produce those as documents in the record.

Dr. Wagner: Thank you, doctor.

Dr. Haines: Now, are there any further questions to be asked, or any further information to be volunteered? Dr. Gudeman, have you anything to say in regard to this matter?

Dr. Gudeman: My name is E. A. Gudeman. I am a graduate of Columbia University and universities abroad, and have the degree of Doctor of Philosophy and Chemistry. As I understand this, it is a question of the wholesomeness or unwholesomeness of glucose; and, as I understand you, Professor Haines, you are going to compare the wholesomeness or unwholesomeness of glucose with cane sugar. I do not believe that that is quite far enough to go. I think you ought to take a second subject into consideration, and make your comparisons as regards the wholesomeness or unwholesomeness of glucose as compared with starch and cane sugar. Starch is the basis for the so-called commercial glucose, or cane syrup; and I think that Dr. Wagner will agree with me when I say that in running down the series there are five products: the first being starch; the second and third being commercial glucose, which is not a constant body. I do not want to use any technical terms, but we have low converted glucose and high converted glucose, which differ in the percentage of their ingredients. Those are the second and third. The third and fourth would be still further hydrolyzed starch, which comes under the head of corn sugars,

either called grape sugar or the extreme, which you can designate as dextrose—I believe they call it anhydrous sugar. Now, you start off with starch, and you finish up with dextrose. The intermediate product is corn syrup, or commercial glucose; and in order that we may make a comparison as regards wholesomeness, we should take the two extremes into consideration. Dextrose is similar, or can be more closely compared to cane sugar; and I asked the two gentlemen this morning as regards the digestibility of starch, dextrose and cane sugar. Dr. LeCount, if I understood him correctly, made the statement that commercial glucose was predigested starch. I do not want to presume to quote him, but if I misunderstood him, then I suggest the statement of Dr. Cyrus Edeson, of 30 years ago, which was identical—that commercial glucose is predigested starch. Dr. Vaughn stated that dextrose was digested, so he went to the extreme. Now, we have an intermediate product there as regards its digestibility, taking the one extreme, starch, and the other extreme, dextrose, or cane sugar; and you should compare the product with those two extremes. I think that is only fair to the product. Now, there has never been a word said against the wholesomeness of starch. I do not know as there is any statement in literature that has ever condemned the consumption of starch, and I do not think you can find any statement in literature that has ever condemned the consumption of cane sugar. Now, as a logical conclusion, I should say that the intermediate product between starch on the one hand, and dextrose or cane sugar on the other—commercial glucose or corn syrup—will come exactly in the same class. As regards the digestibility of the product, it has not been brought out by these scientific gentlemen, as I thought it would be brought out, that there is a radical difference whether you introduce the drug into the system through the mouth, or whether you introduce it into the stomach direct. Now, digestion, as I understand it, stops with the stomach action. The absorption, or intestinal digestion, takes place after it leaves the stomach. Consequently, when you say that dextrose is ready to leave the stomach and be absorbed, it is only a time factor that comes in there between the predigested product going into the stomach, and the undigested product. It is a time factor there that will eliminate those small differences. They are very small. In regard to commercial glucose, there is the presence, as the gentleman stated, of 15 per cent of substances which do not need to be digested in the stomach. That must be taken into consideration. When you inject the product directly into the body, into the veins, then there are other factors that must be taken into consideration. For instance, in the work published by Dr. Kaufman, of the University of Toronto, it is shown that people working in starch works generate an enzyme in the blood which seems to hydrolyze raw starch faster than any other enzyme that we know of. So the introduction of starch into the system may lead to some very peculiar reactions. It is unfortunate that in every case where anyone has been asked regarding whether there is any record as to the unwholesomeness of glucose, the English case has been mentioned. That was an exceptional case, and the term "glucose" was brought into that case simply because of the fact that in England what is known here as corn sugar is known there as solid glucose, while the commercial glucose or corn syrup of this country is known in England as liquid glucose; and in the newspaper reports the distinction was not made between the solid and the liquid glucose, and the commercial syrup, the syrup product made from starch, was mistaken for the solid product that they use over there. That was just simply the exception that proved the rule. It was the exceptional character of the pyrites, as Dr. Wagner has stated, that came from Spain, and contained up to as high as over 2 per cent arsenic.

Dr. Haines: Your statement recalls something that happened in my own experience very many years ago. One of my teachers at the Institute of Technology at Boston was the late Professor Nichols. He investigated some cases of poisoning, he told me, due to the presence of toxic substances in cane sugar. I think, if I am not mistaken, that I am warranted in saying that the substance was a salt of tin. I believe that some preparations of tin were at that time used by certain refiners in refining their cane sugar, and they had been improperly removed; and a certain number of cases of mild poisoning occurred. I relate this from memory only, and I am not clear about the details; but I do know, however, that cane sugar has had its purity questioned, in the same way that corn sugar has had its purity questioned, through the presence of extraneous substances. Therefore it is not, I presume, peculiar to this substance that we are discussing, but is common to many other substances. Now, are there

any others who have any questions to ask, any comments to make, or any information to volunteer? I might say that I have been unfortunate if, in this morning's session, I did not make a point clear which I had hoped to, but in order that there may be no misunderstanding, I again state that this hearing is not for the sake of determining the wholesomeness or unwholesomeness of commercial glucose or corn syrup by itself alone. It is a hearing held to enable the Standards Commission to determine whether these substances may be used more freely in the manufacture of jams, jellies, and preserved fruits. We have been petitioned to make new standards for these and some other food products, new standards by which a more liberal use of corn syrup or glucose would be permitted. Now, in order that we may reach proper conclusions, we wish to know ourselves whether there is anything unwholesome in corn syrup, commercial glucose; whether they are nutritious; whether they are as nutritious as cane sugar, which they probably would supplant, to a certain degree, etc. This hearing, therefore, is solely for the purpose of enabling this commission to establish, possibly, new standards for certain food products, particularly jams, jellies, preserved fruits, etc., and not primarily at all to give a standing to the products that have been discussed. I think I made that statement at the opening of the session; or at least I thought I did. If not, I trust it will be understood now. Now, Dr. Gudeman has made a suggestion here relative to the relative sweetness of cane sugar and commercial glucose. In order that the commission may be informed about these facts, I should like to ask some of the men here who are authorities on the subject concerning this matter. Dr. Gudeman states that commercial glucose has about 60 per cent—is that what you said doctor?—of the sweetness of cane sugar.

Dr. Gudeman: Yes, sir. But that is a personal matter, to a great extent, because in making that test you are depending on the taste of the individual. That is my own showing, about 60 per cent. If a person can taste more closely than I can, he may show higher; and vice versa. I believe there is a personal factor that may account for 10 per cent either way.

Dr. Haines: Dr. Carlson, have you any information upon that subject that will guide us?

Dr. Carlson: No, I could not state it in percentages at all, but the experiment could easily be made. It is not a matter of individual preference; it is a matter of comparison of the two substances in the same individual.

Dr. Haines: Dr. Woodyatt, have you any figures on the subject?

Dr. Woodyatt: I have not made any experiments.

Dr. Haines: Dr. Wagner?

Dr. Wagner: No.

Mr. Zimmerman: I wish to state that I have had a good deal of experience in sugars, as far as taste and sweetness are concerned, and I agree entirely with the doctor. We have made on an average of 20 to 30 tests a day, and to test two substances properly in comparison the matter of individual taste is highly important. We have sample syrup tested by eight or ten persons, and one person will make it sweet, and the others will not say that it is sweet at all. We have taken and diluted in one pint of water different amounts of sugar, down to one gram, and in the same way with glucose; and it differs entirely. One person might say he could taste the glucose, and not taste the sugar; and the other person vice versa; and some other person might taste both of them. As an additional factor, if you put a trace of acid in the sugar, it brings out the sweetness in some cases; and again, it may cover up the sugar. It is a matter of individually cultivating taste, and your taste can be cultivated along the sugar line or along the glucose line, either way. You cannot compare them rightly together unless you cultivate a taste.

The following view, expressed by one of the largest wholesale grocers in the United States, is typical of the general impression of those who attended the hearing:

"The benefits I secured from this trip, I believe, will react in a way towards the benefit of all concerned, for I am fully convinced and became so during the hearing, that this excellent article has been greatly abused and maligned and shall proceed to explain in detail to our many salesmen its many merits and good qualities."

National Wholesale Grocers Convene at Boston—Tenth Annual Event Well At- tended by Members and Guests— Whitmarsh, with Entire Slate, Re-elected—Interesting Pa- pers Read Before Convention

THE tenth annual convention of the National Wholesale Grocers' Association of the United States was held as per schedule, from June 14 to 16, inclusive, at Boston, Mass. The Copley-Plaza Hotel was headquarters. It was about the smoothest and most peaceful affair of its kind ever brought to a successful conclusion in the history of this organization. Not a ripple disturbed the tenth annual from the first to the last day. To one who has followed the destinies of this admirable brotherhood of merchants it must seem well-nigh impossible that any element of dissension should ever be permitted to become a factor for evil here. It may be truly said this association sets an example which all the world mercantile might well be glad to follow.

The program of the convention, as published in the June issue of this paper, was followed quite closely. Theodore F. Whitmarsh, president of the association, was re-elected to office for the ensuing year, as was his entire retinue of satellites. Among the addresses delivered before the convention were some of marked merit. The entire meeting seemed to have been tuned to the inspiring keynote of co-operation.

Among the speakers were E. J. Slattery, who spoke for Mayor Curley of Boston; O. J. Moore, Channing H. Cox, W. C. McConaughy, Geo. E. Lichty, John H. Schaefer, R. W. Weir, W. B. Timms, O. B. McGlasson, E. N. Hurley, Fred R. Drake, Dr. L. A. Fischer, E. A. Filene, S. H. Adams, R. Dickinson, F. A. Aplin, C. A. Lantz, F. H. Wentworth, Dr. E. E. Pratt and M. T. Copeland.

Dr. Carl L. Alsberg, chief of the Bureau of Chemistry, was unable to attend the convention, before which he was scheduled to deliver an address. A letter from him was read by President Whitmarsh. It follows:

Mr. Alfred H. Beckman, Sec'y., National Wholesale Grocers' Asso., Copley-Plaza Hotel, Boston, Mass.

Dear Mr. Beckmann:

It was with keen regret that I was obliged to decline your invitation to address the National Wholesale Grocers' Association during its convention at Boston next week, and I am glad of the opportunity to make a few remarks to be embodied in the minutes of the proceedings.

The suppression of unfair competition is one of the results of the enforcement of the food and drug act. To protect the consumer is another. The two things are really one. By protecting the consumer much unfair competition is incidentally prevented; by preventing unfair competition the consumer is to a large extent protected.

If the enforcement of the food and drugs act is to lead to the protection of the consumer and to the suppression of unfair competition, it is necessary to have yard sticks with which to measure what is fair and what is unfair are definitions and standards for the various products that are subject to the food and drugs act. If there is no general agreement as to what a given article is, if in other words there is no yard stick for it, obviously very little can be done by the officials who have to enforce food and drugs acts to

prevent unfair competition with reference to this particular article for which no yard stick exists. If there was no general agreement as to what vinegar is, no official would be able to prevent the sale of diluted crude acetic acid as vinegar—a most unfair practice. The general agreement as to what vinegar is represents in fact a definition and a standard for vinegar.

I imagine that many producers and distributors think that definitions and standards are arbitrary and fanciful things, the creation of the imagination of a set of impractical though perhaps well-meaning officials. Definitions and standards, if they are to have weight and authority, must be merely what is generally agreed to or at least what is agreed to by the majority. They can not change the meaning of words, they can not change the nature of the articles standardized. And so it is true that for very many articles there is such general agreement and such complete knowledge on the part of the producer and consumer alike, that they are to all intents and purposes standardized.

No official has any difficulty in convincing the court as to what such an article is. In the case of other articles, not so generally used and understood, this is more difficult. In the case of articles that are new or produced by completely new methods or in cases in which trade custom has been confused by sharp practices, it may be exceedingly difficult to explain the facts to the court. It is here that there is the greatest need for standards which shall express what is accepted as fair and just so as to protect both producer and consumer. It is here that the greatest lack of uniformity is found. It is here, because there is no generally accepted yard stick, that officials and courts take varying positions, with the result that the producer who does more than a local business is liable to be in constant hot water in his endeavor to meet the requirements of various jurisdictions. Just and reasonable definitions and standards will tend to help him, since they will tend in time to unify practice throughout the country. They will help to protect the honest producer from the unfair practices of his unscrupulous competitor; they will help to protect the consumer. They should harm no one who is doing a legitimate business.

Much has been said during the past few months concerning the legality of standards. Nothing that has transpired is at variance with the long established practices of the department. It has always assumed that words as a rule had fairly definite meanings and that a given article possessed fairly definite properties. It has always endeavored to establish in court by evidence what given words on labels mean and what the properties of a given article are, in order to lay the foundation for proof that in a given case the words were misused or that the article objected to had not the properties which it was reasonable to expect. Nothing that has recently transpired demands a change in this practice.

I trust, Mr. Beckmann, that if these ideas appeal to you, you will present them to your association so that they may

receive your association's careful consideration. I feel confident that some day they will receive its vigorous support.

Respectfully,

(Signed)

CARL L. ALSBERG,
Chief.

President Whitmarsh delivered his annual address at the opening session of the convention. It is here reprinted in full:

PRESIDENT'S ADDRESS.

This is the tenth annual meeting of the National Wholesale Grocers' Association of the United States, and as your president it is my pleasant privilege to bid you welcome, and to express the hope that the proceedings we are entering upon may prove as fruitful to our membership as have our deliberations in the past.

At this time custom ordains that your officers and committeemen shall render an account of their stewardship, of the work that has engaged their attention in the year closing, and set forth what, in their judgment, are the problems that should have your consideration during the coming year, with such recommendations concerning such problems as shall seem proper and expedient to them.

During the past year our growth has continued normal, and we are in a state of glowing health; we have been active in many fields. With what success, the reports of the various committees will show. Our membership has increased, our finances have grown, and our activities have been broadened.

I do not feel it incumbent upon me to review the year's accomplishments at any great length, for in addition to the reports of your other officers and committeemen that will be submitted in regular order, we have from month to month recounted our activities promptly and fully through the medium of our monthly publication, the "Bulletin." We had nothing to conceal, and believing that you were at all times entitled to the fullest possible information regarding the work of your servants—the men to whom you had for a year entrusted the management of your association's affairs—we have sought in this manner to render you a monthly balance sheet for your inspection.

We have felt that the best interests of all were advanced as our membership was made better acquainted with what its officers were doing. The great object of our association, "To Advance the Welfare of the Wholesale Grocery Trade," we have kept steadily in view, and always in a way to invite the fullest discussion and criticism. As our members are getting on better reading terms with this paper they are giving expression to their appreciation of it in a way that makes us feel fully compensated for the time, labor and money expended in its publication.

It might not be amiss to say here that our members can secure a much wider recognition of the work we are doing, and help create the favorable public sentiment to which we are of right entitled, if they will, when the "Bulletin" is received, scan its pages closely, make typewritten extracts therefrom of such matter as may be of interest to the general public, and send them to the local newspapers and trade journals who, in our experience, are always glad to receive and print such matter. All copies of the "Bulletin" should be kept on file for future reference, and therefore if any article of interest is too long to be typewritten, please do not clip it from your copy, but send to Mr. Beckmann for an additional copy. During the past year the trade papers and commercial journals of the country have given us very freely of their columns, to our undoubted advantage. Think of the additional publicity that would be ours if our members were all to adopt the simple method I have pointed out for obtaining it. I believe the public would, by the spreading broadcast of such information, be the more hastily disabused of any lingering notions that may still exist as to the supposed uselessness of the jobber. True, we are doing a valiant work through our Educational Committee, but why leave the task altogether to them? Why should not each one of us constitute himself an individual committee of one for the spreading of true information regarding the wholesale grocer in his locality?

Closely associated with the work of having the importance

and necessity of the wholesale grocer to the business structure better understood is the work of our various conference committees. You will hear how they have met with similar committees from the National Cannery Association and the American Specialty Manufacturers' Association, and of the reciprocal good that has come from such interchanges of thought; you will have the story rehearsed of the splendid achievements of our Arbitration Committee; you will be acquainted with our participation in the convention of the United States Chamber of Commerce. These and other committees of your association have been effectively cementing the relations existing between kindred associations and our own, to the end that our interests where they are of a common nature may be furthered in a co-operative spirit that eliminates lost motion and prevents our working at cross purposes.

For some time past we have had growing evidence of a desire on the part of governmental authorities to aid, foster and protect legitimate business. Legislation of late has had that trend, decisions of the courts have cleared away many of the doubts that have harassed the business man, and in the creation of the Federal Trade Commission we believe a tribunal has been established to which business may have ready access for the extirpation of those trade evils which we believe are well within the general meaning of the term "unfair practices."

But if experience should demonstrate that some of the evils complained of that make the way of the legitimate merchant, like that of the transgressor, hard, I believe the sentiment of the country to be such, if properly appealed to, that it will demand the enactment of laws that will afford the remedy. I do not know whether the Federal Trade Commission, under its present powers, can afford full relief or not, but I do know that the sense of justice of the American people will not tolerate the continuance of such practices once they are satisfied as to their injustice. For the great heart of the American people beats true. Knowingly, it will not permit abuses to go on that work harm to the small merchants throughout the length and breadth of the land, and that give an unfair advantage to a few large combinations that thrive and grow fat at the expense of the many. It will not grant any special privileges or favors to the smaller man, and the latter, if I understand him right, does not ask them, but we may be sure that the public will see that nothing less than even handed justice is dispensed to him.

Chief among the problems that beset the small, independent merchants of the country just now are (1) chain stores and (2) mail order houses. Both owe much of their success to methods that I believe constitute "unfair trade practices," and in the case of the mail order house, at least, the government, through discriminatory postal rates, has aided very materially.

Our objections to the chain store and mail order concern are not actuated by any motives of envy or jealousy, or by any fear that they will displace us or our customers, the independent retail grocers of the country, in the general scheme of distributing food products, for if it can be shown that the chain stores and mail order houses are the most economical channels of distribution from the producer to the consumer, their existence is justified, but if they are not the most economical channel and they thrive at the expense of the independent merchants through unfair trade practices, then we do offer most serious objection to the continuance of such trade evils, and believe they should be brought forcefully to the attention of our state and federal governments. This nation has for its fundamental law a constitution guaranteeing to all equal right to life, liberty and the pursuit of happiness, and in the proper pursuit of the means of livelihood the individual has time and again been assured that equal advantages shall be guaranteed to all, but special privileges vouchsafed to none. If our present laws do not suffice to afford relief, or if in the instances complained of it is decided that the Federal Trade Commission is without power to act, then the heart of the people will dictate that the proper legislation be enacted to correct the evils. More than this no one can fairly ask.

The chain store I do not regard a serious menace to the small grocer. Wherever it has shown the way to economical management, to the elimination of waste, or how two blades may be made to grow where there was only one before, we are in its debt, and cheerfully make acknowledgment of our obligation, but where an advantage is enjoyed that is based on grounds not fair and legitimate, their methods of doing business in that respect are open to censure. The chain store, and the large retailer, too, frequently purchase goods on the same basis as the wholesale grocer, and where they have so succeeded in securing goods nationally known they have, not infrequently, offered them to the public at cost or less than cost in order to lure trade to their stores, to sell them, not the particular articles featured, but such articles with such others that carry a profit that will more than compensate them for the loss sustained on the well-known brands. Such a selling plan, I believe, constitutes an unfair trade practice; it violates a fundamental principle of good business, that all merchandise shall be sold at a reasonable profit only, and not at a loss or for an exorbitant profit. It constitutes an imposition on the purchaser who, when not buying the special items featured by cost or less than cost prices, is obliged to pay more than a fair margin of profit for such goods as he may purchase. Some may say, let the small man resort to the same merchandising trick of offering a few standard items at cost or less than cost and reimburse himself on other goods as to whose real value the general public is not so well informed. But who would profit by such a course? The consumer? Certainly not, for if he pays 2 cents less for one item than it is worth, be sure he will pay 2 cents to 4 cents, and perhaps 10 cents more, for another than what constitutes a fair margin of profit. If the practice is wrong in the case of the chain store or the mail order house its adoption by the smaller merchant would not make it right. Offering one article for less than its cost is never done except for the purpose of deluding the prospective purchaser and selling some other article or articles for more than they are worth. It constitutes an unfair trade practice, subjecting the merchant who does not resort to such tactics to unfair competition, and works to the disadvantage of the public, for the latter in buying such items as are not featured in this way is obliged to pay more than fair prices for them.

Incidentally, I might remark here that I do not believe that the manufacturer who sells direct to the chain stores, the large retailers and the mail order houses is doing himself justice. It is, of course, his privilege to sell to any one he chooses, and at such prices as he may deem advantageous to himself. We do not attempt to challenge that privilege, nor even attempt to claim the right to challenge it. But I most earnestly believe that a manufacturer is preparing his own downfall when he sells to less than five per cent of the food distributing agents of the country at the same prices he does to the jobbers, who are obliged to resell such products to the other ninety-five per cent of the food distributing agents comprising the small merchants of the land. Personally, I believe there is no doubt that any such manufacturer is in grave danger eventually of losing ninety-five per cent of his trade, because by his discrimination in favor of five per cent, and against the others, he makes it impossible for the other ninety-five per cent to continue to handle his goods at a profit, and the public, which buys so largely from the independent retail grocer, no longer finding that particular manufacturer's product for sale, will soon turn to the goods of some other manufacturer who employs a policy of distribution that is free from discrimination. In this connection it is interesting to note that the laws of the land now expressly prohibit discrimination in price between different purchasers of commodities in certain classes of cases; we see here a distinct trend toward legislation that will eventually prohibit all kinds of unjust discrimination.

Furthermore, it may be noted that the chain store, mail order houses and others now constituting this preferred five per cent, and owing no small part of their prosperity to the manufacturer himself, will soon be so powerful that they can control and dictate to the manufacturer.

In thus declaring my views I am not actuated by any

desire to supply all the retailers direct, for I believe that we wholesalers as a class are broad-minded enough to realize that if a manufacturer can distribute direct to the consumer or the retailer at a price that will ultimately result to the greater advantage of the consumer or retailer, he should do so, and no wholesale grocer should or does question the right. When any channel of distribution ceases to be the most economical the reason for its existence has gone, and it will in the very nature of things be relegated to the realms of memory.

The mail order houses have also resorted to the same merchandising device of offering certain goods at less than their known value in order to sell others for more than a fair price, in addition to which they have taken full advantage of the inadequacy of the postal rates for certain classes of mail. I cannot say that I blame them for taking advantage of this laxity of the government in performing a service for less than its actual cost. They would be exceedingly stupid not to profit by such an opportunity while they may, but we do offer serious objection to the government's share in crushing the smaller retail merchants of the land. The government can, if it chooses, operate certain of its departments at a loss, although it is not a good business practice, but it has absolutely no right to persist in such a course, when by so doing it works an injustice to any class of its citizens, and we must continue urgently to demand of Congress and the government the speedy correction of this injustice. We ask no special privileges for ourselves, nor for those whose interests are similar to our own, but we believe we are within our rights in demanding full justice. We want no more than any one else, but we should accept no less. There is no justice in requiring the people of the country to pay 2 cents to send a letter when at 1 cent the service would show a profit, while the large mail order houses are charged 5 cents for a carrying service that cannot be performed with profit at 10 cents. No one but the mail order houses themselves profit by these inadequate rates, for all the moneys that are lost in the operation of the postal service are ultimately extracted from the people, either by direct taxes or indirectly as in the case of the charge of 2 cents for a letter service that can be performed for 1 cent. Those deficits are made up by you and me and all other taxpayers, and while I may be somewhat obtuse, I cannot for the life of me see why money should be taken from us in order to help pay the transportation charges of houses which by governmental privilege wax fat and earn profits far beyond the dreams of the most avaricious wholesale dealer, more particularly when such privilege threatens the very existence of the small dealers of the country. What would the country at large think of a Department of State or a Department of Agriculture that operated in the interest of certain divisions of industry, or certain classes of our population, to the detriment and disadvantage of others? If any branch or department of the government were to engage in a service benefiting the few to the financial loss of the many, what a cry would go up when the discrimination became generally known and appreciated. Do not the present postal laws create such a condition?

These are some of the evils that hang heavy upon our trade. Insofar as they have their origin in what we consider to be unfair trade practices I believe they should be brought to the attention of the Federal Trade Commission; insofar as they can be remedied by legislation, that cure should be sought, and insofar as they can be relieved by changes in the postal laws that relief should be sought.

And how are we to arouse the trade and the general public to the necessity for affording to us this relief to which we are so properly entitled? By publicity, by education, by having it generally understood wherein lies the injustice. When our position is understood we will have the great majority of the American people with us. Trade evils, like those of any other variety, cannot continue to live in the light. They thrive best in darkness. Can you conceive the people at large failing to demand a revision in postal rates once they fully understand that under the present plan a serious injustice is being worked upon the small merchant and his very existence threatened? Do you believe the

housewife could be enticed to buy cereals at 2 cents per package less if she knew that at the same time she was losing more than this on her coffee or tea purchase? The answer is not difficult.

But not all the troubles that afflict the independent grocer come from without; some have their origin within, and these we should seek out diligently and render every possible aid in removing. Let us not forget, however, that the wholesaler, too, has frequent need for introspection to see if all is well within his own household. Perhaps I have seemed to lay too much stress on the ills that the retail business is heir to, but if I have, it is because I believe that his troubles are equally ours, and that as we help him solve them we will lay those specters that rise to plague us. Some of the retailer's trouble, and the wholesale merchant's, too, has come from a failure to understand the cost of doing business. In fact, credit experts tell us there is no other one thing that contributes so largely to the wrecks along the business highway as that of ignorance of costs. Our Cost Research Committee has devoted considerable thought to this subject, and by co-operating with the Bureau of Business Research of Harvard University and the Federal Trade Commission, it is hoped that at no distant date a satisfactory cost accounting system will be devised for the wholesale grocer. Such a system has been perfected for the retail grocer and is now in use. I do not know how generally it has been adopted, but however extensively it is not enough. I hope every retail grocer will put it into active operation in his business. As the great body of business men become fully conversant with their costs the number of failures will decrease, for just so long as there is a merchant, either retail or wholesale, who does not know his costs with a fair degree of accuracy just so long will there be a disturbing business condition in the community or section in which he moves. Not knowing his costs, he will not make selling prices that carry a fair return for the time and money he has invested in his business, and in making such ridiculous prices he unsettles trade conditions, as his competitors in meeting his prices are obliged to name figures that if persisted in can result only in the failure of those least able to stand the strain of such ignorant competition. The pity of all this would not be so great if the one guilty, ignorantly or knowingly, of the disturbance were the only one to suffer, but the probabilities are, that others will fall with him.

I believe that the retailer and the wholesaler can both, in various ways, effect savings, which will be reflected in reduced costs, by being educated in the proper care of merchandise, by giving more thought to the quality of goods demanded by their neighborhoods, by buying in quantities consistent with their needs, by so locating as to avoid paying rent for needless space, by considering whether the elimination of credit and deliveries will not enable them better to meet chain store conditions, by making their stores neat and attractive, by rendering that personal touch to the service accorded each particular customer that makes price a secondary consideration, and in such other ways as experience may point out.

The need for greater business efficiency is everywhere recognized. The air seems to be charged with an increasing understanding of it. The trade papers have taken it up; the records of every convention in any way connected with the grocery trade show that a considerable part of the proceedings are given over to a consideration of the subject. Many of the business houses are giving liberal attention to it in their trade catalogues, and some are even using up part of their advertising appropriations in dispensing help to the retailer. It all helps and is a step in the right direction. Our Association has done much to assist; it proposes to do more. We have created an educational department, and engaged to take charge of it Mr. F. W. Fiske, a gentleman whose past experience as Secretary to the Commissioner of the Department of Health in New York was of such a nature that we believe he will be well able to carry out the object for which our educational department is founded, the compilation and dissemination of information of a helpful nature to the wholesale and retail grocers, and tending to make them better or more efficient merchants.

Great apparently is the need for light in all branches of industry, perhaps no greater in ours than in others, but nevertheless extremely necessary. Chairman Hurley, of the Federal Trade Commission, here in Boston, within the past two months, reported that his Commission had canvassed the affairs of some 260,000 mercantile and manufacturing corporations in this country; that of this number more than one-third have not been making any profit; more than another third have just eked out an existence. This is an exceedingly serious situation. More than three-quarters of these 260,000 concerns were found unprofitable and unsuccessful. Only one-tenth of the corporations studied knew their costs of doing business. No laws can properly be passed to aid the man who does not know his cost of doing business. He is to blame for his inevitable failure, for any individual or corporation that is engaged in business and does not make a fair profit is a failure. We shall do our utmost to secure relief for him from unfair competition from without, and shall do all we can to aid him from within to become a more efficient merchant, but we must first instill in his mind, and ourselves understand, that the greatest business calamity that can befall any merchant is the failure to have a full appreciation of the necessity of knowing his costs.

I have recounted what I consider to be some of the more pressing problems that are before us for solution—I say solution, because they will be solved. The first step to a cure in any disorder is a correct diagnosis. Since we know the nature of the disease it remains for us only to decide upon the best treatment, and when we know the disease, and are satisfied that we know how to cure it, there remains nothing for us to do but cure it.

The National Association of Retail Grocers have in the past, under the able leadership of President Connolly and his predecessors, made notable progress in their efforts to correct abuses in the trade. We extend our hearty good wishes to the new President of that Association, Mr. Schaefer, and know that he will further extend the good work of the Association. We also congratulate the American Specialty Manufacturers' Association, the National Canners' Association and the National Canned Food and Dried Fruit Brokers' Association on the success of their efforts in bettering trade conditions.

By way of conclusion, I want to take this opportunity to extend my sincere thanks to those gentlemen who have done so much during the past year to lighten my load and help make my work reach whatever degree of effectiveness it has attained. Happily, we have with us still those men who in the past from the office of President directed the association's course. Judson, Bethard, Drake, Wason, Lichty and McGlasson are still giving as freely and ungrudgingly of their time and talents to your affairs as they did in the days they occupied the office I do now. During the year I have had occasion to call on each of them at one time or another to perform some association work, in the doing of which some personal sacrifice was entailed, and their answer in every case has been an unhesitating assent.

Your secretary, Mr. Alfred H. Beckmann, has rendered the same diligent, intelligent and conscientious assistance which we have come to expect from him; while our counsel, Messrs. William C. Breed and Dana T. Ackerly, have continued to guide us aright and keep us in the paths of legal rectitude. With Congress and the various State Legislatures turning out legislation at a bewildering rate, and of an infinite variety, this has been no small achievement.

To all these gentlemen, as well as to our committeemen, and to our membership generally, who have on every occasion given evidence of a hearty support and sympathetic understanding of our efforts, my thanks go out, and my prediction is that if this same unity of purpose continues to prevail—and I know of no reason why it should not—this organization that we all love and honor, that has been the means of bringing so many of us together in friendly contact and profitable counsel, will increase in usefulness as the years go on, and while there will always be problems to harass us, just as we have them today, we will never be

The Contents of Coca-Cola

You may be interested to know just what that popular beverage Coca-Cola contains. There have been so many *verbal* reports from uninformed sources charging it with containing so many different impossible things that facts must be a refreshingly new light on the subject.

We give below an analysis of the beverage as served, based upon an analysis of the syrup by Dr. Mallett of the University of Virginia:

Analysis

	Percentage
Sugar (in form of syrup)	6.58
Caffein (derived from tea) .....	.026
Phosphoric acid .....	.034
Citric acid (from lemon) .....	.003
Flavorings, Caramel, etc. ....	.436
Mineral matter (ash) .....	.001
Alcohol (from flavoring extracts) .....	.075
Water	92.845
Total	100.000



Recently we have published a little book called

A Digest

of the authoritative facts and figures relating to the composition and dietetic value of Coca-Cola. This book was issued with you in mind—it will interest you—send for it.

THE COCA-COLA COMPANY

ATLANTA, GA.

without the means of meeting them intelligently and combating them effectively.

Perhaps the most important address of the convention was that of Edward N. Hurley, Vice-Chairman of the Federal Trade Commission. It follows:

BY EDWARD N. HURLEY.

It is an honor to be invited to address your Association, one of the strong and progressive trade organizations of our country. The wholesale and retail grocery business constitutes a most important part of the world distributing system. There have been many changes in details connected with the industry, but the large essential facts remain the same from year to year. Whether supplying the mining camps of California in the days of the forty-niners, or furnishing up-to-date delicacies today for the city dweller's table, the main features of supplying a primary human want remain the same.

The question of distribution of food products is a most important one. I believe it is one of the most important questions before the country today. The high cost of living is materially affected by any increased cost in the distribution of these products. The margin of profit is so close that the distributor who starts to sell outside his freight zone is automatically prevented from competing in other fields.

Your theory that the manufacturer can distribute his product through the jobber collectively far better than he could through individual effort seems to me to be very practical, as we all know that it is very expensive for a manufacturer or merchant to sell a single line at a small margin and make a profit.

This most important question, which affects our people as a whole, should be taken up by the Government in co-operation with the food distributors and traders of the country as an economic question. The Federal Trade Commission hopes to have some facts from the food producers and distributors that will be helpful when we complete within a few months our Report on Industries. Your organization has devoted a great deal of time and money with the object of solving your many problems. I am particularly pleased that you are devoting every effort to improve your cost accounting system, with the view of working out a system that will show the returns on all your products. The great trouble with most of our manufacturers and business men of the country today is that if they are manufacturing or selling, say, six different products they may be making a profit on three of them, but on the other three losing money. Is it fair for any manufacturer or jobber to sell part of his produce at a profit and the other part at a loss? Don't you believe that he should charge a proportion of his overhead and selling expenses to every article that he handles, and isn't it a mistaken policy to sell any article at a loss? This method of doing business frequently forces competitors to fail, particularly when they have to compete with manufacturers and jobbers who are making substantial percentage of profit on part of their line and are competing unfairly with their other line by cutting and demoralizing prices.

Gentlemen, every article sold should share its percentage of overhead, executive, accounting and selling expenses. It is the only safe way to conduct a business. To claim that your overhead is reduced because you are handling a large volume and to handle any product solely for this reason is causing more trouble in this country than any other one method.

METHODS OF DISTRIBUTION IMPROVING.

The study of the best and most direct methods of distribution are receiving today a consideration equalled only to that given to manufacturing.

The saving of time and expense through the creation of a closer co-operation between the wholesaler and retailer, as evidenced by your Arbitration Committees, and the standardizing of terms and discounts, are moves in the general direction of better business methods. Even more important is a study of the costs of doing business. You are all familiar with the splendid work of the Bureau of Business Research of Harvard University in preparing a standard form of accounting for retail grocers, already adopted by

many stores. A similar form is under consideration for wholesalers.

The success of the retail grocer is a vital matter to the wholesale grocer. All are part of one system of distribution. Whatever helps one helps the other. If the retailer knows his costs through having a proper system of cost accounting he will be able to do a successful business for a long time, and the wholesaler will have the same man to deal with year after year, instead of a constantly changing grocery customer. Stability in the industry is the result. With a reduced percentage of failures and fewer credit losses, there should come a lessened cost of operation to both wholesale and retail grocer, and both the distributor and the public should be benefited.

In the interest of all it is desirable that the financial losses that flow from ignorant competition be reduced as much as possible. The entire community is damaged when its merchants fail. Some one has to pay the loss. The far-sighted jobber is interested in seeing that the retailer has a fair margin for the services which he performs. It is proper that you advise and counsel the small retailer in your towns. Those to whom you extend credit should recognize the necessity of knowing the cost of selling in order that they may continue to operate a successful business.

For several decades our Government has worked out through the Interstate Commerce Commission a constructive program for the railroads of the country. It has also made effective through the Agricultural Department measures likewise helpful to the farmer. In these cases it has approached the problems in the spirit of co-operation, and the results have been beneficial to all.

The Government's attitude toward business, however, presents again a contrast. The trouble has really been one of point of view. Government action has usually been negative, always scattered and seldom constructive.

Unfortunately, our business men and our Government have been losing valuable time during the past fifteen years in trying to settle our economic and business problems, not by co-operation, not by any scientific method which will bring about results beneficial to our people as a whole, but by resorting to the courts. I know business has been sick, and business has undoubtedly been in a large measure to blame for its illness, but instead of sending for a doctor who could prescribe a remedy that would give practical and permanent relief, the Government sent for lawyers, and you know the result.

A wrong feeling has existed in this country as to the proper relations between Government and business. Even when I went to Washington I had the feeling that business men did not want to co-operate with the Government, but I learned very quickly that they are all eager to co-operate and willing to do everything in their power that the Government desires.

We are talking a great deal these days about mobilizing our industries and co-operating for industrial preparedness. We have been floundering about for many years with no definite plan; in fact, the first step has hardly been taken toward solving our industrial problems and toward attaining the result which we all know is absolutely necessary. Co-operation requires the interest and good will of both sides. Business men are anxious to co-operate with our Government. It is now the duty of the Government to lend its active constructive aid, and it is the earnest desire of the Federal Trade Commission to do everything in its power to help foster American industries.

FEDERAL TRADE COMMISSION AND DEFINITE STEPS FORWARD.

The Federal Trade Commission is endeavoring today to work out a comprehensive, constructive solution of our business problems. We have taken definite steps toward getting at the real facts of industry from manufacturers. Within a few months we hope to be able to give manufacturers first-hand information about their business. I am satisfied from this investigation that the business men of the country are anxious and willing to co-operate with the Commission. I know it. We are in receipt of thousands of letters expressing their appreciation of our efforts. In preparing this Report on Industries we have sent out many thousands of forms, and the percentage of firms objecting to filling them

WHY SACCHARIN WON

The Long, Contested Suit of the Monsanto Chemical Works of Saint Louis, Manufacturers of Saccharin, Is Finally Decided in Its Favor.

The Supreme Court of the State of Missouri in handing down its *unanimous* decision that Saccharin is not deleterious to health, and declaring null and void the statute prohibiting its use recognized the principle that the amount used must be considered. This, the Supreme Court of the United States also did in its decision in the famous Bleached Flour case.

An excessive use of anything is harmful, whether it be sugar, salt or water.

SACCHARIN is much more desirable than sugar as a sweetening agent for soft drinks from any view point: (First)—Healthfulness; (Second)—Economy.

In using SACCHARIN the danger from the use of sugar is eliminated, and the infinitesimal amount of SACCHARIN that is required to sweeten cannot possibly be harmful to any one, either adults or children.

Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

Use SACCHARIN to sweeten and do not hesitate to declare its use on the label. **Such declaration stamps your goods as being healthful.**

MONSANTO CHEMICAL WORKS

Manufacturers of Saccharin

ST. LOUIS

Branch: Platt and Pearl Streets, New York

out is almost negligible. This in itself is evidence of their willingness to do their part and assures us of a basis of fact upon which we can co-operate.

PRESENT ATTITUDE OF DEPARTMENT OF JUSTICE.

The Chamber of Commerce of the United States has a Federal Trade Committee, of which Mr. Harry A. Wheeler, of Chicago, is chairman. Last autumn the Attorney General of the United States after a number of conferences with this committee issued a statement defining the attitude of the Government in anti-trust cases which has been reassuring to business men and dispelled some uncertainty which had been said to exist. He stated that no court proceeding was ever instituted by the Department of Justice until after a most exhaustive investigation in the course of which the parties complained against are given full opportunity to be heard. He stated further in substance that in admittedly doubtful cases where the parties acted in good faith no criminal action at all would be brought, and that even no civil proceeding would be started without first giving the parties an opportunity to abandon the course of conduct, regarded by the Department as illegal.

BETTERING BUSINESS METHODS.

The activities of trade associations like yours and similar business organizations are manifold, and the business done by their members runs into the billions. These groups of associated business men are putting forth special efforts to improve systems of cost accounting, bettering their processes of manufacture, standardizing their output, obtaining credit information, and endeavoring to advance the welfare of their employees, and are bound to be most important factors in our country's development in the course of the next few years.

Special commendation should be given to associations that are endeavoring to build up industry in these constructive ways. Successful production and successful merchandising require many steps in the process of changing the form of the raw materials, and putting the product on the market at a figure adequate to cover the cost of production and the cost of selling and net some profit to the producer, without charging the consumer an excessive price, and neither the individual manufacturer nor the Government alone can work out the many serious economic and business problems involved, so successfully, as can a group of associated producers, laboring together in co-operation. These associations, when conducted intelligently and rationally, with the thought of bringing about improved business conditions, will make it possible for our industries to compete in price and quality in the markets of the world.

BETTERING CONDITIONS OF LABOR.

The question of giving to our workmen continuous employment so that they may average longer periods of prosperity can be solved and other plans for their welfare can be worked out, through trade associations. As we have grown in manufacturing capacity we have come to realize that our employees are one of the most important parts of a successful establishment. That management is successful which is not only efficient in working out economies in production, but which also has the real interest of its employees at heart, and which is anxious to have as many of its employees stockholders as possible, and which also realizes that without the hearty co-operation and enthusiasm of their men the best results cannot be obtained. Many corporations and firms are now raising salaries and wages without the request from their employees. These benefits are commendable and should be supplemented by movements for the general welfare, planned and put into effect by our trade associations.

TRADE ASSOCIATIONS AND GOVERNMENT.

Business and Government can co-operate through trade associations better than in any other way. The Federal Trade Commission's report on industries will furnish associations with facts and figures, not now available, which will enable them to assist in developing and stabilizing their industries. We talk much nowadays about industrial preparedness and the mobilizing of our industries in case of war. This can be accomplished through trade associations more quickly than in any other way. In the countries of

Europe these associations, in co-operation with the governments, have been important factors in improving industrial conditions and particularly in extending foreign trade.

There should be a greater degree of organization and of mutual helpfulness in all lines of trade and industry, so that American business may be welded into a commercial and industrial whole; the part of the Government being to co-operate with business men, on request, to bring about the results that will benefit business and hence promote our national welfare.

VIEWS OF PRESIDENT WILSON.

President Wilson's views on trade associations may be of particular interest to you. In a letter addressed to me, under date of May 12, 1916, he says in part:

"Your suggestion that trade associations, associations of retail and wholesale merchants, commercial clubs, boards of trade, manufacturers' associations, credit associations, and other similar organizations should be encouraged in every feasible way by the Government seems to me a very wise one. To furnish them with data and comprehensive information in order that they may more easily accomplish the result that they are organized for is a proper and useful Government function. These associations, when organized for the purpose of improving conditions in their particular industry, such as unifying cost accounting and bookkeeping methods, should meet with the approval of every man interested in the business progress of the country."

COST ACCOUNTING.

A preliminary study of industry generally, made by the Federal Trade Commission, has revealed the fact that only a very small percentage of the manufacturers of the country make any charge for depreciation of plant or of equipment, and that their products were priced and their profits determined before reckoning this vital and important item. A manufacturer who figures his profits without adequately providing for depreciation and who pays dividends on that basis is paying dividends out of capital and not out of profits.

UNIFORMITY IN ACCOUNTING METHODS.

The subject of more uniformity in cost finding is at present receiving the careful attention of many manufacturers and trade associations. A number of trade associations are in this way achieving marked success in strengthening their industries. It is being demonstrated that a knowledge of cost determined by a uniform practice can improve trade conditions to a remarkable degree. By a uniform practice I mean a common classification of costs, both manufacturing and selling, a uniform method of distributing overhead expense, and a uniform method of providing for depreciation with rates more or less standardized. Where this condition exists, production statistics which are comparable and which will inform and guide the whole industry are obtainable. Manufacturers can then talk in the same language and will be in a position to profit by each others' experience, to conduct their plants more efficiently, and to establish prices more intelligently.

EXAMPLE OF DANGERS OF LACK OF ADEQUATE ACCOUNTING METHODS.

For example, take two manufacturers, say Jones and Brown. They are in the same line of business and bank with the same banker. Jones keeps an accurate cost accounting system, charges off liberally for depreciation on his buildings, machinery, etc. He charges his jigs, tools, dies and patterns against the cost of operation every month or at least every quarter. His overhead is distributed equally and fairly. He quotes a fair price on his product and his customers recognize that they are getting value received. He has a large bank account and is considered a conservative and substantial business man. Brown, his competitor, on the contrary, does not keep a cost accounting system; does not charge off for depreciation except a small amount at the end of each year. Brown maintains that his buildings and machinery are as good as they were twenty years ago. He charges his jigs, tools, dies and patterns to capital account and considers them valuable assets. He figures that he has been quite liberal when charging off ten per cent for depreciation on these items at the end of the year. He is a heavy borrower at the

TIN and FIBRE CONTAINERS

FOR

Foods, Drugs, Oils

Infinite Variety

Large Capacities

Prompt Deliveries

American Can Company

Chicago New York San Francisco

WITH OFFICES IN ALL LARGE CITIES

RUMFORD

The Wholesome

Baking Powder

A scientific preparation being the result of extended research by the celebrated chemist Prof. E. N. Horsford, for many years Prof. of Chemistry in Harvard University.

Dietetically speaking, Rumford is without fault; as a leavening agent it is perfect; as a keeper it has no superior.

DOES NOT CONTAIN ALUM

Its Purity is Unsurpassed.

BUY PURE COMPRESSED YEAST

The discussion about using starch in Compressed Yeast has reached the point in the United States of a decision forcing those who used it to declare the fact on the wrapper or label.

That is how we administer the Food Laws in this country.

In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

We Do Not Use Starch in Yeast

A. P. CALLAHAN & COMPANY

2407 La Salle Street

Telephone Calumet 410

CHICAGO, ILLINOIS

bank, and the banker is probably loaning him money that Jones, his competitor, has on deposit. This furnishes Brown working capital, to do what? To continue to run his business in a slipshod slovenly manner, to cut prices and ruin the industry in which they are both engaged.

Ignorant competition is most dangerous to the development and success of our country. The Clayton Act and the Federal Trade Commission Act have no control over this menace. It is estimated that ninety per cent of the manufacturers and merchants in Germany know absolutely what their goods cost to manufacture and sell. If you compare our figures, which show, according to estimates, that only 10 per cent of our manufacturers and merchants know what it costs to manufacture and sell their products, you have the answer as to why Germany has been so successful in developing such a high standard of efficiency in manufacturing and distributing their products not only in Germany but in the markets of the world.

It is a fact well understood among business men that the general demoralization in a large number of industries has been caused by firms who cut prices not knowing what their goods actually cost to manufacture; the cost of selling also, which is equally important, is almost wholly lost sight of. Are the officers of the companies who are cutting prices right and left, irrespective of their costs, *fair to their customers, stockholders, or competitors?*

Quality and service are becoming greater factors in the field of merchandising. Long after the price of a product is forgotten the *quality of that product is remembered.*

ACCOUNTING ESSENTIAL TO PROGRESS.

Government has complained about business. Business men have complained of the attitude of the Government toward business. Whatever justification there may have been in the past for such complaints, today there is a better understanding between Government and business. Since better business methods usually begin with better methods of cost accounting, scientific cost keeping becomes in a very definite sense the basis of our prosperity. The Government, through the Federal Trade Commission, by recommending the subject of costs to the business men of the country at this time, and offering to aid in the actual development of proper cost systems, is endeavoring to do a constructive piece of work which is of the greatest importance. The problems of credit and finance, of foreign trade and unfair methods of competition, and of labor and capital—all will begin to solve themselves once the subject of costs receives on every hand the attention it rightfully deserves.

Secretary Beckmann's report, read by him, before the convention, follows:

REPORT OF SECRETARY.

This celebrates the tenth anniversary of the National Wholesale Grocers' Association of the United States and indicates substantial progress and emphasizes the fact that the Association is serving a good purpose of direct benefit to every wholesale grocer, member as well as non-member.

When this Association was organized in Buffalo, N. Y., ten years ago, the 6th day of this month, we enrolled a membership of one hundred and twenty-three (123), since which time we have grown to our present proportions of eight hundred and nineteen members and two hundred and sixty-six branch houses in forty-eight states.

Our members may well be proud of the great prestige that their Association now enjoys. This prestige is not attributable to numbers alone, but rests rather on the high ideals to which the Association was dedicated at its inception, and the loyalty and honesty of purpose with which those ideals have been adhered to.

The worthy men who have served you as officers and committeemen during the past ten years, giving generously of their time and talents for the general good, and without price, surely deserve unstinted praise and admiration.

The legality of our efforts is unquestioned, and necessarily so, for the reason that we have directed our activities only in accordance with the law.

The past year has been a very busy one for the officers and committees of your Association. Your secretary es-

pecially has been in a position to realize this, and has endeavored to the best of his ability to assist the various officers and committees in accomplishing their purposes for the best interests of the Association.

We hope, through the Federal Trade Commission, to develop conditions which will prove that the wholesale grocer not only occupies an important economic and legitimate place in the distribution of food products, but is serving the greatest good to the greatest number.

The wholesale grocer is not alone in the change of trade conditions, yet it is he in whom we are directly interested. Many years ago the exit of the wholesale grocer was predicted, but when we consider that he is recognized by the majority of manufacturers as the most economic and convenient distributor, for the manufacturer, to the retailer (the latter numbering about 300,000), it is not likely that the thinking manufacturer will dispense with his services. We are an economic and necessary link in the chain of distribution of food products, and we are within our province when we occupy that place in the commercial industry which is ours, provided our affairs are conducted in the interest of the many, instead of the few, and the former has always been our slogan.

One of the deplorable conditions would seem to be the lack of moral courage and the legal right, collectively, to decline to distribute the product of a manufacturer who deprives us of about five per cent of the preferred class of trade, by selling it direct at the jobber's cost or less, leaving the balance for the wholesale grocer to supply in convenient quantities with an extension of credit absolutely necessary to the average retailer, thus acting as a medium for food distribution to the many, and the part of banker as well for the retailer, which functions few manufacturers will assume.

This question is of no small moment, and is one which must eventually be solved. How many of the three hundred thousand retail grocers in these United States would the manufacturer of a staple or proprietary article be willing to accord the accommodations to, which the wholesale grocer must assume today? How many of those same manufacturers are most anxious that each one of those three hundred thousand retail grocers shall distribute their product to the consumer? A liberal use of common sense, honesty of purpose, coupled with the best interests of the many will solve the problem.

There is no subject which your attention requires a more serious consideration of, than the one which will determine whether you shall continue to serve the best interests of the many, or whether you will be an unwilling party to gradually place the distribution of food products in the hands of a few and thereby eliminate the small merchant, who serves the mass of consumers in a manner best suited to them, and is, therefore, a benefit to his community. Communities are built up and prosper through the influence of local merchants. Can this condition be perpetuated if the business is concentrated in the hands of a few, who have no interest in the affairs of a given community? May your secretary suggest that you analyze this subject from all viewpoints; it is a serious question in which you, the wholesale grocer, are directly interested, and especially your customer, the small retail grocer.

Our financial statement shows the following, and indicates that we are not only progressing, but that with our increased expenditures, due to our various activities, we are able to report a substantial balance of our fiscal year, ending June 1, 1916:

Balance on hand May 1, 1916. \$21,416.51

Receipts to June 1, 1916, for

dues 51,106.66

\$72,523.17

Disbursements:

Vouchers numbered 1149 to 1412, inclusive, being from June 1, 1915,

to June 1, 1916..... \$55,789.37

Balance on hand June 1, 1916..... \$16,733.80

This does not include interest on deposits and exchange on checks, included in the Treasurer's report.

In Millions of Homes

There's Only One Spread for Daily Bread

**JELKE
GOOD LUCK
MARGARINE**

is eaten with satisfaction at every meal. Always the same fine flavor—the same delicious taste, the relish and enjoyment there is to a pure, wholesome appetizing food.



Order Your Package Today

Churned by

**JOHN F. JELKE CO.
CHICAGO**

**Illinois Vinegar
Mfg. Company**

19th and Rockwell Streets
CHICAGO, ILL.

**MANUFACTURERS OF HIGH GRADE
DISTILLED VINEGAR**

Canned Salmon

ALL GRADES ALL SIZES

Largest Distributors
in the World

KELLEY-CLARKE CO.

NEW YORK CITY SEATTLE, WASH.

SPIELMANN BROS. CO.

MANUFACTURERS OF

**CIDERS, VINEGARS &
COMPRESSED YEAST**

MAIN OFFICE

Sheffield and North Aves.
CHICAGO, ILL.

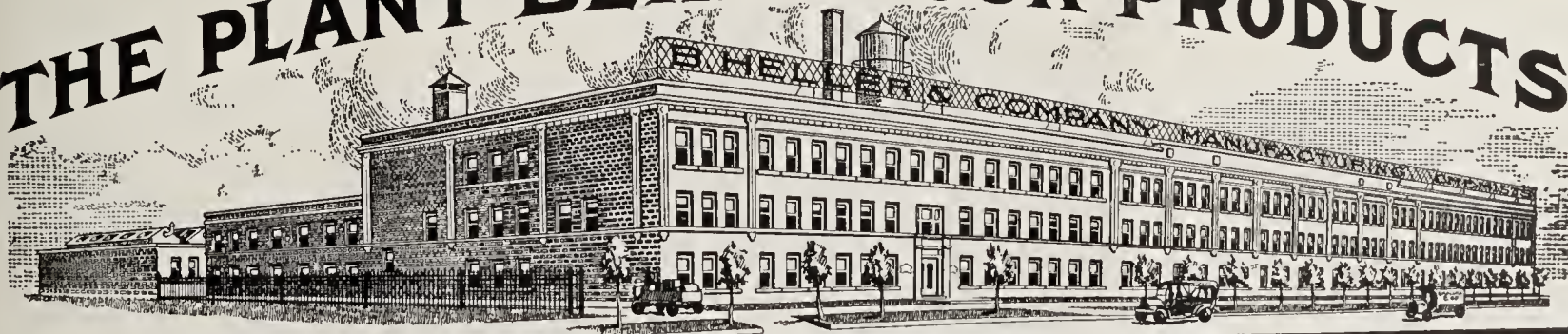
"GOOD-BYE FLY"

According to Department of Agriculture Bulletin No. 118: Apply 0.62 pounds Borax to every 10 cubic feet of manure. Apply Borax particularly around edges; sprinkle with 2 or 3 gallons of water. This treatment should be repeated with each addition of fresh manure. Flies lay their eggs in fresh manure. Borax prevents their hatching.

Don't use more Borax than recommended above.

B. HELLER & CO.

THE PLANT BEHIND OUR PRODUCTS



CHICAGO, U.S.A.

Our members should not be unmindful of the fact that the Association is expending both time and money in furnishing them with Service and Regulatory Announcements issued by the Bureau of Chemistry, which contain valuable information concerning the proper standard for and the correct labeling of food products. Your secretary respectfully recommends that these announcements be read by members and filed for future reference. It is not infrequent that we are asked for information which is contained in these announcements and which indicates that our members do not seem to be giving the proper attention to these publications.

This might also be said of our Bulletin. The Bulletin endeavors to convey, in a brief manner, not only the activities of each month, but calls especial attention to important matters in which our membership is interested, yet from the inquiries received on various subjects which are explained in the Bulletin, from time to time, it would seem that the members are not reading, nor filing, the Bulletins properly. I call attention to these facts because I believe that many members are losing the benefit of information that may in some cases prove of great value to them.

We invite all inquiries at headquarters on subjects in which our members may be interested, and if our members will record their inquiries, we will endeavor to not only answer them direct, but also through the medium of the Bulletin.

Our Bulletin has been one of the serious thoughts of President Whitmarsh for some time past, and we are pleased to learn, from comments received at headquarters, that it is serving a good purpose.

There is no organization in this United States which is conducted on a more conservative, economic and consistent line, with a view to serving the entire wholesale grocery trade, than is the National Wholesale Grocers' Association of the United States, and if the loyalty which is due that Association is continued in the future as has been displayed in the past, there is no end of our possibilities for constructive and educational work in the years to come.

In this connection your president, with the approval of the executive committee, has instructed the employment of a competent man to assist in the development of our educational campaign, and we have been fortunate in securing the services of such an one, who will be associated with headquarters' office, beginning July 1, 1916.

I cannot, consistently, make an elaborate report, for the reason that many of the subjects of vital concern to our membership will be covered by the various committee reports, and in closing it is my pleasure and privilege to again record my appreciation of the co-operation which has been extended by my fellow officers and committeemen during the past year.

Respectfully,

ALFRED H. BECKMANN, *Secretary*.

The following resolutions were adopted by the Tenth Annual Convention:

SPECIAL RESOLUTION.

J. E. Moore.

WHEREAS, God in His infinite wisdom has most recently called to his eternal rest our beloved friend and loyal associate, Mr. J. H. Moore, for many years a member of this committee, and a staunch and inspiring worker in many fields of our Association's endeavor,

Resolved, That we do here express our deep sorrow in the great loss we have all sustained, and extend to his bereaved family our heartfelt sympathy.—W. C. McCanaughey, chairman; Joseph S. Bragdon, B. D. Crane, Dana T. Ackerly, Justus Krafft, George P. Thompson.

RESOLUTIONS.

Beloved Massachusetts, with her wealth of historic treasures, abounds in uplifting influence and inspiration. We are reminded of the determination of its rugged founders that whatever the obstacles, right shall prevail. During the past few days it has been our most fortunate privilege to visit those spots made sacred by the blood of those men who valued justice and liberty more than life and gave their all to eliminate the evils of their day.

It is well to have been here. Those evidences of historic glory have stirred us mightily to renew our pledge of loyalty to this great association and to consecrate ourselves anew to the high ideals that we have set before us.

And now as we leave this sacred ground, we cannot help but feel that in our battle for the elimination of the unjust and evil practices of our day, we have received renewed strength and courage.

WHEREAS, Our visits to the historic shrines and the world-famous institutions of learning in this grand old commonwealth have been so generously and perfectly planned and carried out during our delightful sojourn here by our brothers, the Wholesale Grocers of New England and their associates, with large hearted hospitality and boundless welcome,

Therefore be it Resolved, That on behalf of the members of the National Wholesale Grocers Association of the United States, we express our sincerest thanks and hearty good wishes.

To the charming ladies whose gracious influence and inspiration has led our generous hosts, the Wholesale Grocers of New England, to overwhelm us with unbounded hospitality and make our sojourn in this great historic center one of unparalleled pleasure and lasting remembrance. In this we would be unjust to ourselves if we failed to emphasize our indebtedness individually and collectively to the untiring efforts of the officials of the New England Wholesale Grocers—Messrs. William M. Flanders, Clarence E. Hanscom, H. B. Bain and George B. Toby, and their able associates.

To the Reverend Bishop, John W. Hamilton, D. D., the Reverend Herbert Swan Wilkinson, D. D., the Reverend Edward T. Sullivan, D. D., and the Reverend Edward A. Horton, D. D., who so eloquently invoked the divine blessing upon our deliberations.

To Honorable Edward J. Slattery, representing the Honorable James M. Curley, Mayor of Boston, for his most cordial and earnest address of welcome.

To the Honorable James M. Curley, Mayor of Boston, for his most eloquent, forceful and patriotic appeal on behalf of American citizenship.

To Honorable Channing H. Cox, the distinguished Speaker of the Massachusetts House of Representatives, for his patriotic and inspiring words of greeting on behalf of the Commonwealth of Massachusetts.

To John J. Schaefer, President of the National Association of Retail Grocers; Mr. Ross W. Weir, President of the National Coffee Roasters' Association; Mr. L. V. B. Cameron, President of the National Association of Brokers in Refined Sugar; Mr. Edward A. Filene, of the Chamber of Commerce of the United States of America; Mr. Richard Dickinson, President of the National Cannery Association; Mr. Frank A. Aplin, President of the National Canned Foods and Dried Fruit Brokers' Association; Mr. Carl A. Lautz, President of the American Specialty Manufacturers' Association, for their most welcome presence at our annual meeting, their cordial and friendly greeting on behalf of the great trade organizations severally represented by them, and the spirit of genuine helpfulness and co-operation evinced by their attendance here and their instructive speeches.

To Charles William Burrows, President of the National One Cent Letter Postage Association, for his instructive and convincing address on the important subject of a lower drop letter postage rate.

To Dr. Louis A. Fischer, Chief of the Division of Weights and Measures of the United States Bureau of Standards, for his earnest and valuable address upon the subject of weights and measures.

To Samuel Hopkins Adams, Editor Advisor, New York Tribune, for his forceful and entertaining plea in behalf of legitimate and honest advertising.

To Franklin H. Wentworth, Secretary of the National Fire Prevention Association, for his impressive address upon the subject of fire prevention.

To Dr. E. E. Pratt, Chief of the Bureau of Foreign and Domestic Commerce, for honoring us by his attendance on behalf of the Department of Commerce of the United States,



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Over 100 varieties, including Potted and Deviled Meats, Luncheon Beef, Ox Tongue, Salmon, Sardines, Pork and Beans, etc.

Other Armour Quality Products: Star Ham and Bacon, "Simon Pure" Leaf Lard, Grape Juice, Bouillon Cubes, Devonshire Farm Style Sausage.

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and

**PRIDE OF THE FARM
Tomato Catsup**

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AN IMPORTANT ANNOUNCEMENT

TO THE JOBBER AND RETAILER



The St. James Importing Company, of New York and London, the well-known distributors of Waw Waw Sauce, has been bought by men of strong financial backing who bring to the Company not only ample resources but also the full benefits of many years' experience with one of the largest and most successful manufacturers of food products in the country.

Plans are already laid to place Waw Waw in its deserved position as the King of Table Sauces.

We cannot make Waw Waw Sauce itself any better but we can and will make Waw Waw Sauce a better seller.

An extensive advertising campaign in the leading Journals is now in course of preparation. No pains, expense or effort will be spared to make Waw Waw a leader in easy, steady selling, just as it is now a leader in quality.

Full details of the new plans will be mailed to jobbers and retailers throughout the country. In the meantime the already increasing inflows of orders are being filled promptly from our New York warehouse.

SPECIAL—If you are not fully acquainted with the unusual merit of Waw Waw Sauce, write at once and a full size sample bottle will be sent for trial on your own table.

St. James Importing Company **NEW YORK**

and for his most interesting, enthusiastic and prophetic words on the bright prospects for America's export trade.

To Dr. Melvin T. Copeland, Director of the Bureau of Business Research of Harvard University, for his interest and enthusiasm in behalf of better business methods and his words of encouragement to the wholesale and retail grocers of the country.

To Honorable John L. Bates, a worthy son and former Governor of the great Commonwealth of Massachusetts for honoring us with his presence and his ringing eloquence and cordial greeting.

To Mr. George S. Smith, justly honored and distinguished citizen of the City of Boston, former president of its Chamber of Commerce, and long prominent in many fields of business organization and generous civic service, for his presence with us and his splendid speech.

To our President, Mr. Theodore F. Whitmarsh, for his deep interest in the welfare and advancement of our Association and his self-sacrificing labors of the past year as our leader and in behalf of the education of the wholesale and retail grocers of the country to a more scientific and efficient conduct of their business affairs, to the end that the consumer as well as the merchant may benefit by better, cleaner and purer food more economically marketed.

To our most efficient and painstaking Secretary, Mr. Alfred H. Beckmann, whose devotion to the interests of our Association has commanded our highest respect and admiration.

To the members of the Executive Committee, to the Directors and the various Standing and Special Committees, for their most earnest and effective work rendered during the past year.

WHEREAS, The Federal Trade Commission has since its establishment been of incalculable aid to the legitimate business interest of the country in stamping out unfair competition and questionable trade practices; and

WHEREAS, The said Commission has with the greatest efficiency investigated the methods of business pursued by the various lines of trade; and

WHEREAS, By reason of its wise and practical recommendations the business of the country is now entering upon a new era where inefficiency and wasteful methods shall no longer obtain; and

WHEREAS, Honorable Edward N. Hurley, Vice Chairman of the Commission, has honored this convention with his presence and by a memorable address of the greatest interest and value:

Therefore Resolved, That we tender to the Federal Trade Commission and to Mr. Hurley, its distinguished representative here, our sincerest thanks and appreciation, and assure the Commission and Mr. Hurley of our hearty support and best wishes for the continued success of their work and our willingness at all times to render any assistance that may be desired.

WHEREAS, The National Wholesale Grocers' Association has repeatedly placed itself on record in opposition to the use of trading stamps, gift enterprises, premiums, schemes and deals in the distribution of food products, which action is hereby affirmed; and

WHEREAS, The Supreme Court of the United States has approved as constitutional certain state laws taxing the use of coupons, trading stamps and premiums; and

WHEREAS, There is a diversity of opinion among manufacturers and distributors, both wholesale and retail—

(A) as to the propriety of using coupons and premiums, deals and schemes,

(B) as to the wisdom of urging individual state legislation which would lead to confusion in interstate commerce;

Therefore Resolved, That this entire subject be referred to the Economy Conference Committee with instructions to confer with similar committees from the American Specialty Manufacturers' Association and the National Association of Retail Grocers with the purpose of recommending such federal legislation as will be uniform throughout the country and just to manufacturers, jobbers, retailers and consumers.

Resolved, That the trade press of the country merits our fullest appreciation and gratitude for the invaluable and im-

partial assistance rendered in the endeavor to solve the vital problems affecting our business, and that we hereby extend to them our sincerest thanks and the pledge of our co-operation for the promotion of the welfare of America's food trade;

Resolved, That in order to secure more favorable conditions for the export of products of the United States to South American countries, we respectfully urge the President and Congress to co-operate with the trade of this country in the endeavor to secure reciprocal arrangements, particularly with respect to the excessively high tariff rates now prevailing in many of those countries;

Resolved, That we reaffirm our endorsement and advocacy of uniform state laws upon all commercial subjects and particularly the enactment by each state of one effective general food law, uniform with the United States Food and Drug Act of June 30, 1906, as opposed to numerous and conflicting special laws each relating to particular products; and

Further Resolved, That we respectfully urge the various state legislatures that have not done so to enact a compulsory weight or measure branding law, based upon the federal weight branding amendment of March 3, 1913;

Resolved, That we urge the state food control officers and the weights and measure officials of the various states to adopt and enforce weight or measure branding regulations in harmony with the thorough and comprehensive federal regulations adopted by the Secretaries of the Treasury, of Agriculture, and of Commerce in United States Food Inspection Decision No. 154 as amended;

Resolved, That we deprecate the enactment of food standards in state and federal statutes upon the ground that standards for food products are not proper subjects for action by legislature but rather by scientific food officials, manufacturers and merchants, and also because the enactment of numerous standards for various products by each of the state legislatures, rather than by food control officers, would render impossible, uniformity in requirements, in the forty-eight states.

WHEREAS, The fire waste of the United States and Canada is greater in proportion than that of any other countries in the world; and

WHEREAS, A majority of the fires causing this waste are easily preventable, being due to the individual carelessness, neglect and irresponsibility of citizens and others; and

WHEREAS, Laws, ordinances and regulations exist and inspection orders are issued for the reduction of fire hazards and the safeguarding of the common safety;

It is Hereby Resolved, That the National Wholesale Grocers' Association is in favor of state or municipal legislation designed to assess upon individuals, firms or corporations the cost of extinguishing or attempting to extinguish all fires occurring at the premises of the same, whenever such fires are the result of failure to comply with any law, ordinance, lawful regulation or requirement of any state or municipal authority enacted or made for the prevention of fire, and that the campaign of the National Fire Protection Association for this object is hereby commended and endorsed;

WHEREAS, The California Dried Fruit Packers have unaccountably and without consulting the Contracts Committee of our Association, announced certain changes in the form of rail route contract previously adopted and recommended by them with our Contracts Committee;

Resolved, That we fully approve the action of our committee in vigorously protesting against changes in the form of contract without giving them an opportunity to be heard and we respectfully refer this subject to the incoming Contracts Committee for such action as shall be just and proper.

WHEREAS, The National Wholesale Grocers' Association has at all times urged the enactment of such federal laws as will protect the consuming public from impure foods and unjust weights and measures; and

WHEREAS, One of the gravest existing evils is the transmission of fraudulent and dishonest representation throughout the United States mails;

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FOR USE OF MANUFACTURERS

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Soluble, Concentrated, Terpeneless

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GENERAL DISTRIBUTORS FOR
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"Deliciously Different"

EVERY PIECE PRODUCED UNDER GOVERNMENT SUPERVISION. LOOK FOR THE ORANGE WRAPPER



SULZBERGER & SONS COMPANY
U. S. A.

Therefore Resolved, That we most earnestly urge the Congress of the United States to immediately enact such a law as will effectually prohibit the transmission through the United States mail of any advertisements, circulars, or other matter that are misleading, fraudulent or dishonest, and that violations of such law be made punishable by heavy fines or imprisonment, or both; and

Further Resolved, That this Association continue to urge the enactment of effective false advertising statutes by all states that have not thus far acted, and also the prompt and faithful enforcement of those statutes already on the statute books of the several states;

Resolved, That we hereby extend to the National Coffee Roasters Association, and its President, Mr. Ross W. Weir, our sincere appreciation for the earnest and comprehensive campaign they have undertaken against false advertising and misleading representation with respect to coffee, and that we refer this important matter to our Executive Committee for such action as shall seem to them advisable;

Resolved, That we favor the prompt passage of the uniform bills of lading act, now pending in Congress, and already adopted by the Senate.

WHEREAS, We believe that the government should not directly or indirectly continue the grant of special favors to any interest by imposing disproportionate rates on different classes of mail matter; and

WHEREAS, Over fifty bills are now pending in Congress to secure a reduction in the drop letter postage rate to one cent;

Therefore Resolved, That we earnestly urge our representatives in Congress promptly to enact such legislation at this session; and

Be it Further Resolved, That we earnestly urge upon Congress and the Postoffice Department the immediate adoption of such laws and regulations as will speedily put an end to the present discriminatory system under which certain classes of mail matter are carried by the government at a loss, and thousands of the country's merchants and smaller communities suffer the gravest and most unjustifiable wrong to the advantage of a favored few;

Resolved, That we continue vigorously to oppose all attempts on the part of certain interests to secure the enactment of discriminatory legislation in the various states that would prevent the sale of the ordinary household remedies by retail grocers and other general merchants.

WHEREAS, The education of the merchants and also the school children of the country to an understanding of the terms of the metric system will assure the eventual adoption of that system by Congress as the sole system of weights and measures in this country; and

WHEREAS, Such adoption of the metric system would, we believe, result in vast advantages to the merchants of the country, both in domestic and foreign trade;

Therefore Resolved, That as a practical step in that direction we urge manufacturers and also distributors who have private brands to label their goods not only in terms of our present system of weights and measures, but also in terms of the metric system as now permitted by food inspection decision No. 154 as amended, in order that the public generally may by constant sight of the metric equivalent gradually be educated to understand metric terms.

WHEREAS, The Federal Trade Commission, the Bureau of Business Research of Harvard University and other agencies have called attention to the enormous wastage resulting from unscientific and inefficient methods of business employed by the manufacturers and merchants of the country, particularly as regards the knowledge of the cost of doing business;

Therefore Resolved, That this Association urge the manufacturers, wholesalers and retailers of the country to study and adopt scientific cost accounting systems in their respective businesses to the end that the vast number of commercial failures that occur in this country every year may be meas-

urably reduced, and that by the consequent saving in wastage the rising cost of products generally may be effectively checked; and

Further Resolved, That we approve of the establishment in the office of the Secretary of this Association of a Bureau of Education and the employment of an expert who shall devote his time to a constant and exhaustive study of conditions in the trade and to the devising of ways and means whereby wholesale and retail grocers may eliminate wasteful practices and carry on their business with more efficiency to the end that by better service they may more successfully compete with other distributive agencies and still more adequately and economically serve the consumers of the country.

W. C. MCCONAUGHEY, *Chairman*,

JOS. W. BRAGEON,

B. D. CRANE,

DANA T. ACKERLY,

JUSTUS KRAFFT,

GEO. P. THOMPSON.

The entertainment features of the Tenth Annual Convention left nothing to be desired. They included automobile trips around Boston for men and women guests, a harbor voyage to Nantasket, in which all participated, and the annual subscription banquet, on Thursday night, which was a masterpiece of its kind. On this occasion, Mayor Curley spoke. He praised the members of the Association highly for the service they are rendering to the American public through their spirit of co-operation, and declared that a similar feeling among all the citizens of the great cities of the country would quickly solve all the problems besetting the municipalities.

WM. J. MOXLEY'S

"SPECIAL" OLEOMARGARINE

The Taste Is
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Where
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Gives better satisfaction than 75 per cent of butter used. Cost one-third less. Try it and be convinced. Order a package from your dealer.

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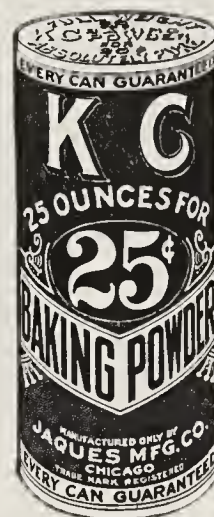
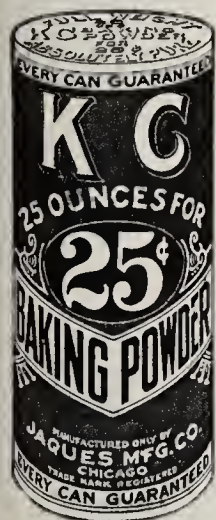
CONTAINS NO ALBUMEN (sometimes called white of egg) OR ANY ADULTERATION

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It Complies With All PURE FOOD LAWS, both State and National.

Sold and pushed by grocers throughout the United States who appreciate fair dealing by the Manufacturers and who like to give their customers full value for their money.

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Do Your Customers Know This Little Girl?

"Miss Premium" is the attractive new trade figure for

**"Swift's Premium"
Oleomargarine**

*Miss
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and a fine little friend-maker for the product she represents.

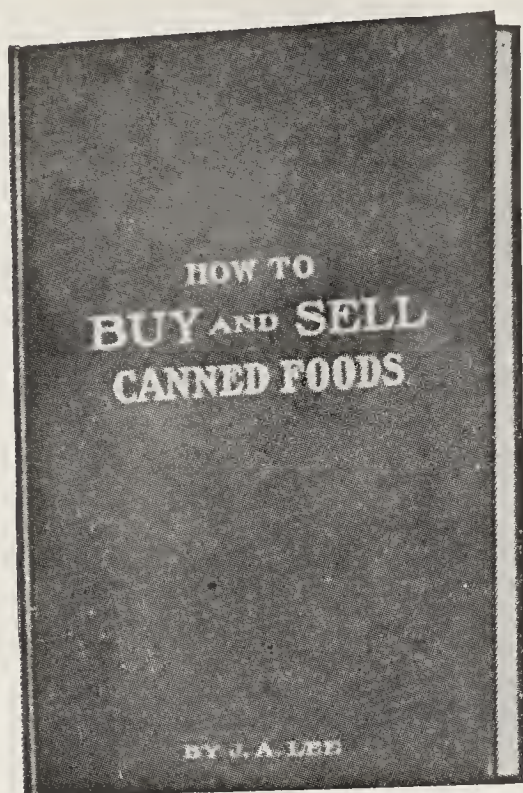
Send for the free lithographed cut-out (13 colors) reproducing "Miss Premium." Also lantern slides and electros on request.

Introduce "Miss Premium" to your customers. Let her help you sell "Swift's Premium" Oleomargarine.

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SALAD DRESSING
A MAYONNAISE OF
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When you use Sefton Folding Cartons for packing your products you're
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economy and efficiency; and
Sefton Service is based on your
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We make cartons or every kind of
product that can be packed in car-
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we know how. Better find out
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Which is Better for the Boy

Forced Exercise or Fun?

Apply your answer to oat food.

Oat food is also important. It is food for growth. It is rich in brain and nerve needs. It has for ages been the marvel vim-food.

In some homes it is forced. It is made a duty but not a luxury. Yet Nature lavishes on oats her rarest charm and flavor.

In some homes the oat dish is a dainty. Its flakes are made of big, rich grains, unmixed with puny, starved oats.

Those housewives have discovered Quaker Oats.

Men and women, boys and girls, revel in this oat dish. The food they need is the food they want. And they eat it in abundance, as they should.

Quaker Oats

Energy Food Made Delightful

Quaker Oats is not a doctored oat food. No flavor is added, nor is Nature's flavor altered. Man can't improve on that.

We simply pick out the plump grains, the full-grown, luscious oats. Two-thirds of the oats are rejected as not good enough for Quaker.

Find out the result—it will pay you. Look into the package—see the big, white flakes. Cook them and note the aroma. Taste them and note the superlative flavor.

There are few food problems more important than getting delightful oat food. And it costs you no extra price.

10c and 25c per package
Except in Far West and South

A \$2.50 Aluminum Cooker

Made to our order, extra large and heavy, to cook Quaker Oats in the ideal way. Send us five trademarks—the picture of the Quaker—cut from the fronts of five Quaker Oats packages. Send \$1 with them, and this double cooker will be sent by parcel post.

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You are always sure of the finest results when you use Cottolene for shortening and frying. Foods prepared with Cottolene have a delicious wholesomeness that is gratifying to the appetite.

Use Cottolene for shortening when you bake biscuits, pies and pastries.

Fry doughnuts, fish, chicken and vegetables in Cottolene. It adds to the joy of eating.

Your grocer will supply Cottolene regularly. It is packed in pails of convenient sizes.



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It not only makes better bread but scientific tests show its more wholesome than fresh flour

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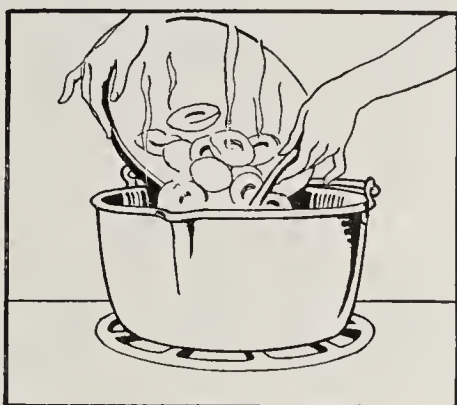
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*"The Atlas Label
Protects You."*

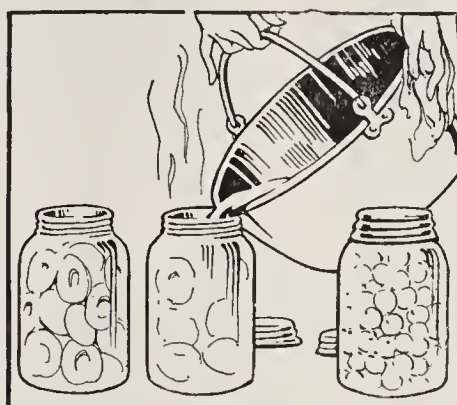
Housewives now use part Karo (*Crystal White*) instead of all Sugar for their Preserving Syrup. This Improves the Quality, and Lowers the Cost



Make a syrup of boiling water, one part Karo (*Crystal White*) and three parts sugar.



Drop the fruit into the syrup and cook slowly until soft enough to pierce with a fork.



Then drop fruit into sterilized jars. Strain boiling syrup over the fruit. Fill jar to overflowing. Fit cap and seal quickly.

THERE is one thing about preserving that the housewife has never reconciled herself to—and that is the amount of sugar she uses. This is a particularly sore point this year with the price of sugar continually advancing.

Today the practical housewife is using one part Karo (*Crystal White*) to three parts sugar in making her preserving syrup—and finds that she is cutting dollars off her sugar bill.

In addition she finds that she gets

a richer preserving syrup that is free from the usual cloying sweetness.

If you would have your fruit more delicious, more palatable use Karo (*Crystal White*) in your preserving syrup.

The use of Karo (*Crystal White*) also prevents crystallization in preserves, jams and jellies.

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THE AMERICAN FOOD JOURNAL



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Gleanings from the World of Foods.

A monthly magazine devoted to the
interests of food control of-
ficials, food manufacturers
and wholesale grocers.



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THE AMERICAN FOOD JOURNAL

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Vol. XI.

AUGUST, 1916.

Number 8.

Westfield Tottering to Its End

THE legs of the famous (?) "Westfield Pure Food Standard" are wobbling; the mask of the so-called "Westfield Movement" is about to be removed; the days of the journeying about the country of the perambulating food show, under the name of the "Westfield Domestic Science School," are about numbered. The million women throughout the United States, who have each contributed ten cents to help bolster these up, and the other untold millions of women who have the others talk about it, will wonder what has happened. The answer is simple. The bubble has burst! The "Standard" was not founded upon a rock. The "Standard" was not founded at all. It never existed, except in the minds of those who hypnotized the people into the belief that it existed. It never was anything but a clever advertising scheme.

Senator John F. Sheehan, of Holyoke, whose senatorial district includes the town of Westfield, has officially asked the national authorities to put a stop to the pernicious activities of this group of clever promoters who are profiting by this shameless propaganda—shameless, because its success depends upon the inspiring of a needless fear in the minds of the public, and because, too, its effect is to promote the trade of one group of manufacturers to the detriment of other groups, whose goods are just as pure and nutritious and wholesome. Senator Sheehan's attention was called to the general slackness of the work of boards of health, throughout the Commonwealth, by published accounts of a recent quarterly meeting of the Massachusetts Association of the Boards of Health, at which many local boards of health were severely criticised and charged with doing nothing to justify their existence. Therefore, he wrote to Dr. Allan J. McLaughlin, Commissioner of Health of Massachusetts, asking for further information concerning the activity and efficiency of the boards of health in

this senatorial district, little thinking, no doubt, that casual inquiries concerning a state senatorial district would ultimately reveal conditions affecting a large section of the United States; but the commissioner of health sent a special deputy to make an investigation and the result was so astounding as to cause further inquiries on the part of Senator Sheehan who has now submitted all the facts collected to the U. S. authorities for their attention. Senator Sheehan's letter is as follows:

COPY.

The Commonwealth of Massachusetts,
Senate Chamber, Boston.

May 27, 1916.

To the Honorable, the Federal Trade Commission,
Washington, D. C.

Gentlemen:

Your attention is respectfully invited to the following statement. Severe criticism reflecting upon the administration of local boards of health of this state having recently appeared here, it became my duty, as Senator of the Second Hampden District of the Commonwealth, to institute inquiries to ascertain in how far such criticisms applied to the four boards of health in my district, among which is that of Westfield, Mass. My investigations, relative to the board of health of Westfield, indicate that one serious condition exists therewith which is beyond state control. Assuming it to be within the jurisdiction of your Honorable Commission the facts are brought to your notice as a matter of public duty.

Within the past few years public notice has been taken of what seemed to be an authentic list of so-called pure foods alleged to have been approved and endorsed by the Westfield, Mass., Board of Health. Nation-wide publicity has been given to this list through prominent New York publications, both in

advertising and editorial columns, and these have referred back to thousands of examinations made by this board of health or Lewis B. Allyn, before the purity of the listed foods could be finally determined; the list has been printed and many thousands of copies circulated for pay, or otherwise; other Westfield literature makes alluring claims to the superiority of the foods listed in its name and an attractive picture is established for the careful housewife. The representations made have impressed my own constituents and no doubt influence their selection of food products accordingly.

I now find that instead of being the disinterested public spirited movement, which the public believes it to be, this Westfield proposition, from first to last, is a huge advertising scheme supported by private interests, that it is without an element of public service, and has no basis of scientific truth.

In support of my own observations and conclusions as to the character of this so-called Westfield Standard, I quote as follows from a statement furnished me, in my official capacity, by an official of this Commonwealth:

"The Board of Health of Westfield is engaged in activities outside of its statutory functions. In its annual report of 1913, this board published an alleged standard for foods, and special reports have been published and are still being circulated containing lists of foods claimed to have been examined and passed as conforming to this standard. * * *

"The reports made by the chemist of this board, Lewis B. Allyn, refer to the large amount of work done by the board because of the examination and the determination of the admission of food articles to these lists. Other literature shows that a large number of these lists have been distributed or sold for cash, the claims varying from many thousands to nearly one million copies so distributed. Other literature claims that these lists contain practically all food products that are pure, clean and wholesome, which naturally implies that practically all food products have been examined by this board and that those not listed are not pure, clean and wholesome. The facts and information show that this so-called Westfield Standard is only a name given to a preferred list of foods. The foods so listed have not been examined, as is represented, by any scientific test by the Westfield Board of Health. The method adopted for listing these foods will be disclosed later.

"The Westfield Board of Health has neither the laboratory facilities nor the employees qualified to make the necessary examinations nor the money with which to carry out the extensive investigations which should be made in order to ascertain that all the food articles listed comply with the requirements of the alleged standard. It could not have made the necessary investigations to certify that all the foods in the list were 'packed and sold under sanitary conditions,' for such investigations would have cost millions of dollars and this board with its three members and six employees spends only about \$7,000 per annum.

"There is unmistakable evidence that the Westfield Board of Health has allowed itself to be commercialized for a money making scheme. Lewis B. Allyn, the chemist of the board, is also employed in a private laboratory operated by a New York publication with advertising space for sale. He acts as the chemist and food editor of this publication. The name of the

Westfield Board of Health furnishes the official prestige for the articles advertised under this system. A letter was written by this publication making a proposition to an advertiser in which the indorsement of Mr. Allyn and the Westfield Board of Health is the consideration offered, and advertisements have appeared showing that official indorsements have been obtained from this board for certain food articles advertised in the publication.

"This alleged standard is of unusual character as it excludes from food substances found not to be unwholesome in food, and it contradicts official standards of purity established by the United States Department of Agriculture and recognized by every state in the Union as authoritative. This standard seems designed to select for exclusion from the list foods containing certain substances which have been matters of trade controversy among sharply competing manufacturers. By this process of elimination one class of manufacturers has been favored to the exclusion of the other class and a gigantic advertising propaganda has been developed, supported by the favored class, made valuable and impressive because the name of the Westfield Board of Health is used in association with the enterprise, and which would be utterly useless without the prestige which goes with the name.

"This advertising scheme found its way into a syndicated list of some 90 newspapers throughout the country where it was run for about 26 weeks, and this false doctrine spread accordingly.

"The American Chemical Society, at its meeting last month, unanimously reported on this Westfield proposition as among those movements which are 'altogether wrong in principle and opposed to the best interest of the public,' one reason being because 'almost without exception profiting financially by means of advertising is directly connected in one way or another with such campaigns. The movements are, therefore, not disinterested.'"

A member of the committee of the American Chemical Society, which investigated this Westfield Standard, states that the Westfield laboratory, in which the public is told that thousands of elaborate tests have been made, "does not exceed 20x25 feet in size and part of this space is used for desks and records and clerical work." This is the laboratory; the McClure publications is its proprietor; Lewis B. Allyn (chemist of the town) is its employe and out of this combination comes the absurd claims, both in the reading and advertising columns, of the McClure publications, that the standards therein established are actually higher than either the national or state government—an alleged official standard backed by private enterprise.

Evidence in support of the above statements is at your disposal. There is further evidence, taken by the Commonwealth, and also at your disposal, which seriously impeaches the professional ability of Lewis B. Allyn to determine any question of food value or purity—a vital fact in this connection because the whole miserable business of deception of the American public, through newspaper advertising of the "Westfield Standard" or "Westfield Movement" is based upon the supposed integrity of the chemical examinations behind the claims made for that standard. Duty demands a correction of this deplorable evil of trading, through deceptive practices, to excite fear on matters of food consumption in its relation to

health, and I ask your careful and immediate consideration of the foregoing.

Very respectfully,

(Signed) JOHN F. SHEEHAN,

Second Hampden Senatorial District.

The above is not the only jolt which the "Westfield Pure Food Standard" has received from the State House this year. For several years the members of the Westfield Board of Health, or their disciples, have been endeavoring to secure legislation to prohibit the use of benzoate of soda as a preservative, and to exclude from the markets of this state all goods that contain that preservative. The claims as to its harmful effects were made in such evident sincerity that Senator Ezra W. Clark, M. D., chairman of the Committee on Public Health, determined to have a practical test made in order to prove, or disprove the claims of the Westfield Pure Food propagandists. The result of that test is succinctly stated in the following communication, from Dr. Clark to the Secretary of Agriculture, at Washington:

April 10, 1916.

Hon. David F. Houston, Secretary,

Department of Agriculture,

Washington, D. C.

Dear Mr. Secretary:

Permit me to acknowledge, with the thanks of the Joint Committee on Public Health, the receipt of your recent letter answering my query relating to the capacity of certain preservatives to conceal the use of inferior material in tomato catsup.

Inasmuch as you write that your Department has done little experimental work on the subject, I assume that you will be glad to have, for your records, the result of a recent exhaustive and yet practical experiment, made under the auspices of our joint committee, to determine the influences of preservatives upon bad materials, and which result will, perhaps, supplement the Department's information on the subject which you gave to us.

Herman C. Lythgoe, analyst of our State Board of Health, was called before our committee to demonstrate the facts by a practical test. Mr. Lythgoe brought with him a supply of most offensively rotten tomato pulp which he divided into four parts. Part 1 was untreated, being kept as a sample for comparison later; Part 2 was heated and 1/10 of 1 per cent of benzoate of soda added thereto; Part 3 was heated and 1 per cent of benzoate of soda added; Part 4 was heated and to it was added those condimental substances which are used as preservatives when benzoate of soda is not so used, i. e., acetic acid, cinnamon, cloves, allspice, mace, onion and sugar. The result: Numbers 2 and 3 remained in precisely the same state of offensiveness as to color, odor and taste as sample 1—the original material—the benzoate of soda having had no effect upon the mass; but number 4 was found to have been restored as to color of the original tomato, while the bad odor and taste had entirely disappeared, thus confirming the statement in your letter that the condimental materials mentioned will impart their own odor and flavor to the original material.

This experiment was interesting, convincing and conclusive and we are pleased to record it for your information.

Very respectfully,

(Signed) EZRA W. CLARK,

Chairman, Committee on Public Health.

Thus was proven the absolute falsity of the strongest claim made by a self-appointed food-expert and, inasmuch as the whole structure of the propagandists was built largely around their contention that the use of benzoate of soda as a preservative would conceal the presence of material of poor quality, and, in fact, that it was used for that purpose, the impeachment of the whole "standard" followed, as a matter of course.

The exposé of falsity of one phase of the Westfield Pure Food Standard's claims, as revealed by the demonstration before the Committee on Public Health, followed so closely by Senator Sheehan's official demand for federal interference, have led to an investigation of the real character of the Westfield propaganda as a whole; and the conditions found are astounding. The wonder is that such a state of affairs could prevail for so long a time without exposure. It seems beyond belief that millions of intelligent people could be hoodwinked by the hollow pretensions of a man who, when put to the acid test, is found wanting in so many of the qualifications which are required of one who has a right to the position he has assumed. That a small town could be so blinded by the deceptive practices of its board of health as to glory in the notoriety thus achieved is a sad reflection upon the commonsense which New England communities are supposed to possess. But like the millions of people outside of their town they were misled by the solemn warning, and the pretended knowledge of the man whose words they accepted as law, but who now stands forth as utterly incompetent to give any endorsement worth having. The whole amazing campaign has been conducted with such hypnotic flourishes that the public, at large, thought there really was some truth to the diatribes of the generalissimo of the campaign. The millions of good housewives who have been led to believe that their very lives of their loved ones depended upon their faithful obedience to the dictates of this scientific mountebank will learn, with disgust, that they have been the victims of a subtle advertising device, and that the famous Pure Food Standard to which they have pinned their faith is but a name which has been exploited by an alleged food-expert who uses his title as an officer of his town to exploit an advertising propaganda in which cold cash seems to be the motive rather than the consideration for the public health. There really is no "Westfield Standard." Westfield never pretended to have either the resources or the scientific knowledge necessary to determine a standard. The use of the name of the town by Allyn in any way to suggest the authority of the town is protested by Harry B. Putnam, the town's attorney, and this official protest must be considered as applying to such other misnomers as the "Westfield Movement," the "Westfield Domestic Science School" or any other catch-phrase which connects the authority of the town with the private enterprise of an individual.

It is not the purpose of this article to reflect upon the purity or the wholesomeness of any of the foods which have received the alleged endorsement of the Westfield Board of Health, nor to defend any of the foods which, inferentially, have received the condemnation of this same tribunal. So far as the writer knows, all of the foods whether endorsed or black-listed, are pure and wholesome, and in every way desirable and safe for human consumption. The purpose here is to expose the hypocrisy and shamelessness of a small group of individuals who are fattening up-

on the proceeds of a campaign, which depends, for its success, upon the credulity of the public, and its faith in the officials or individuals of a town who guarantee the genuineness of the alleged "Standard." The time has now arrived when the public needs to know who is guaranteeing the guarantors.

The man whose verdict is the last word as to the quality of the goods submitted to him, knows nothing of pathology, toxicology, or pharmacology, a knowledge of which sciences is necessary in determining the effects of food substances upon health, and his knowledge of chemistry is confined to what he has learned at the State Normal School at Westfield. He has never been honored with a degree of "Doctor" of anything, and he has no right to the title "Professor." And, it is this man, who, at an investigation before the Board of Education of Massachusetts to determine his fitness to continue as instructor at the State Normal School, at Westfield, halted and side-stepped when asked to qualify in the simplest of chemical questions, and he it is who has assumed to establish a food-standard "higher than that of the United States Government"! The whole scheme is based on hypocrisy, and is a farce. It is one of those clever get-rich-quick schemes which is operated within the limitations of the law. If "Professor" Lewis B. Allyn was qualified to test food products, if he possessed scientific knowledge on the subjects which might fit him to determine the questions of which he speaks or writes, there might be some reason for the claim made in behalf of this so-called "Westfield Standard"; but inasmuch as he makes no profession to these sciences, there can be no value in his endorsement, or force in his condemnation of any food product. If he possessed a laboratory equipped for a full and complete analysis of food products one might be misled into a belief that he knew what he was talking about. But Dr. McLaughlin, the Commissioner of Health of Massachusetts, reported to Senator Sheehan that the laboratory of the Westfield Board of Health in which it is claimed "Professor" Allyn made his thousands of analyses contains only "A Babcock machine, a balance and dishes for the determination of solids and fat in milk, a sediment tester, a still not yet set up for the distillation of water, and glassware. The board expects to have a more substantial laboratory in the future, as \$125 has been appropriated for this purpose this year." In view of the widely advertised claims of the Westfield Board of Health relative to its Pure Food Standard, Dr. McLaughlin's further statement that "The town has no regulation relative to the protection of food," is highly instructive and significant. It is difficult to understand the mental caliber of a man who has the nerve to proclaim a standard "higher than that of the United States Government" which government annually spends some three millions of dollars in keeping the country's food supply pure and wholesome, and its standard of the highest, as against the official statement of the Commissioner of Health revealing the actual facilities at the disposal of the Westfield Board of Health to accomplish all that they claim.

The simple fact is that the so-called analyses made by "Professor" Allyn, and guaranteed by the Westfield Board of Health are a farce. One of the pet phrases in the Westfield Book is: "The only way that you can be *sure* that your food is *pure* is to let this little book guide you in your buying." The cautious housewife can judge for herself how much confidence she can

place in the "assurance" of the Westfield Board of Health that the foods listed in their book are "pure" when the chemist who analyzes them is ignorant of the fundamentals of his profession as a food expert and the so-called "laboratory" of the board is only a name to bolster up a cause.

Originally "Professor" Allyn was instructor in the State Normal School at Westfield, and at the investigation before the Board of Education, alluded to above, it was admitted that much of the analytical work was done by the students at the school.

The introduction to the Westfield Book, of February 8, 1913, contains the following language: "This book was compiled by the Board of Health of Westfield, Mass.—The Pure Food Town—from over 50,000 experiments made by its capable, unbiased food-chemists during ten years of constant study." When the public understands that these "capable, unbiased food-chemists," were the young students in the Normal School, it will draw its own conclusions as to the value to be placed upon their findings, especially when it is considered that the conclusions of these embryo chemists were in direct contradiction to those of the highly paid experts of national reputation employed by the Government. How farcical the assertion made August 2, 1913: "The Board of Health of Westfield, Mass.—The Pure Food Town—has been carefully and impartially analyzing food products for the past ten years and all that have come up to its high standard and have passed its rigid requirements as to honesty, purity and nutrition are listed in convenient form for quick and ready reference, in this third edition of 'The Westfield Book of Pure Foods.'"

What are admitted to this Westfield Standard? Certain foods which do not contain certain substances. What are rejected? Certain foods which contain certain substances, and which compete with the foods in the other class. It's great for the first named to be among the elect, so long as the public swallows the fallacy and believes it as bona-fide.

There is no evidence anywhere that the Westfield list of foods declared as pure, have ever been examined for nutritive value, or for the several other virtues which go to make up pure and desirable products. There are approximately 1,200 articles of food listed in the latest Pure Food Book. The claim is made by the Westfield Board of Health that each article of food has been examined for the purpose of determining the presence of each of ten substances, to say nothing of the fifty odd non-condimental preservatives and the poisonous vegetable colors nor the inert fillers which the Standard covers. It is asserted "Professor" Allyn analyzed all of those articles of food and vouches for their purity. Inasmuch as it would have required more than 12,000 separate analyses to determine the presence of the ten chief substances mentioned in the Standard, and inasmuch as a smart man working all the time cannot make more than 2,500 analyses in one year, it will be seen that "Professor" Allyn has crowded at least five years' labor into less than two years (?).

It is not necessary to relate the details of the early history of what is now called "The Westfield Movement," farther than to say that, in the beginning, the "Movement" was confined to the town, Mr. Allyn, as the town's chemist, giving out, from time to time, for local information, his lists of certain foods which he alleged were pure and wholesome. This preferred list of Allyn's grew with suspicious rapidity and it was

eventually made up in printed form and circulated about the town. An enterprising New York publication, with advertising space to sell, saw the trading possibilities of this "personally conducted" scheme of selection of food products, and forthwith proceeded to commercialize the proposition by contracting for the services of the personal conductor. Thereupon a Food Department of the paper was organized, and Allyn was made its editor at something like \$5,000 per year.

Extracts from an introductory note in the Westfield Pure Food Book will suffice to show its general character, and to brand it in the eyes of intelligent people as a sham and insult. The note says, in part, "Pure food should contain no elementary substances not normally present in the human body." Starch not being normally present in the human body, it follows that, upon that principle, potatoes are to be condemned as food. And meats, likewise, must be discarded because they are wholly different in their elementals from the flesh of the human body. The whole garden, by this unique declaration, is a worthless and quite useless institution, since there are but few vegetables or fruits which do not contain substances not "normally present in the human body." The book says, on page 16, "There are four great classes of foods: proteins, carbohydrates, hydrocarbons, and minerals." Now, hydrocarbons are indigestible and are *not* one of the four classes of foods. Paraffin is the most commonly known hydrocarbon. Turpentine and gasoline also are hydrocarbons. Again, the book says, "All fats and oils are hydrocarbons." Fats and oils are NOT hydrocarbons. They are glycerides.

Everything moved along smoothly, however, until November, 1914, when the Board of Education began an investigation of charges against Mr. Allyn, who, at that time, was instructor at the State Normal School at Westfield. More than three hundred pages of testimony were taken at that hearing, and that testimony, in its entirety, showed Mr. Allyn in the pitiful light of an ignorant man made vain by the publicity which he had received—so vain, in fact, as not to realize the confession of his own ignorance. Mr. Allyn testified that he had used his own text-book at the school, and, before the grilling was over it developed that there were glaring and inexcusable errors in this book. As the evidence of his pitiful lack of qualifications and professional knowledge accumulated, the man who posed as an authority to establish "standards" and how to determine scientific questions stood revealed as the cheapest of charlatans and tricksters who had sold what little birthright he ever had "for a mess of pottage." The evidence showed charges against Allyn were wrongful use of state property, incompetence as a chemist, lack of integrity in official conduct, carelessness of statements, inconsistency and self-contradiction, false claims to scientific knowledge and deceptive practices. Lack of space prohibits the enumeration of the proven charges, but certain ones will be cited to show how utterly incompetent Mr. Allyn is to pose as a food expert and authority on such subjects. A certain brand of malt was admitted to a place of the Holy of Holies and Mr. Allyn certified to an alcoholic content of 2.62 per cent. Five samples of the same malt analyzed by a real chemist showed an average content of alcohol of between 4 and 5 per cent. In an analysis of a certain vanilla extract, Mr. Allyn was only 90 per cent wrong in his conclusions, as demonstrated by the state chemist.

Mr. Allyn found a high content of capsicum in a certain brand of ginger ale; but a well known chemist of the Boston Institute of Technology could find no trace of capsicum in a companion analysis. Mr. Allyn declared that certain powdered sugar was adulterated with corn starch; but the State Board of Health made a companion analysis and found no trace of corn starch. When cross-examined relative to his analysis of a certain brand of malted milk, Mr. Allyn admitted that he knew nothing about the necessary quantity of fat required in a milk to be pronounced as good. In the matter of examinations of gelatines Mr. Allyn confessed that he was unable to recognize, by chemical analyses, a dirty quality from a clean quality, and finally confessed that his method of procedure was faulty and inadequate, and that he did not know how to determine the difference. Also, he admitted his ignorance of yeast molds and spores in catsups, and acknowledged that his lack of training and education prohibited him from being able to make a biological examination of anything. This will not be lost upon those who know that a knowledge of this kind is necessary to determine the food values and purity of any article that goes into human consumption. Nor will the fact be lost sight of that, notwithstanding this admission of the lack of necessary knowledge of qualifications, this man sets himself up as the official judge of a standard which he claims to be "higher than that of the United States Government."

Mr. Allyn had stated, in a signed article, that some coal tar dyes are deadly poison. After having been made to reiterate this statement, and to reaffirm his conviction, before the Board of Education, Mr. Allyn was asked if he believed any certified coal tar dye was poisonous. His answer was an emphatic NO. After Mr. Allyn had again condemned coal tar dyes, he was asked if he had passed a certain brand of gelatine as a pure article, fit to be advertised in the New York publication, and if he had also incorporated this article in the Westfield Pure Food Book, thus recommending it to the public. Mr. Allyn answered in the affirmative. Whereupon, he was asked to break the seal of an unbroken package of this same gelatine. This offer being declined, the questioner broke the seal and took from the package an envelope properly labelled as containing a *coal tar dye*.

The result of this hearing materially weakened the "cause" for Mr. Allyn left the employ of the state and was deprived of the further value of associating his private enterprise with the name of the Commonwealth. A substitute had to be found, so Westfield is again the "goat." The name of the town is now given to the name of a non-existing Domestic Science School, and behind this garb a food show is being trundled about the country poisoning minds against alleged poisonous food and trading in the name of food righteousness by virtue of the unauthorized use of a town's name.

Mention has already been made of the suspicious growth of this Westfield pure-food list. Its contraction is not beyond suspicion either. One manufacturer who has been carried on the list for years found himself no longer entitled to be regarded as "good" after his testimony before the Board of Education as to the worthlessness of Allyn's analysis; likewise some fifty others have disappeared between editions. None of these seem to be using the advertising columns of the publication which pays Mr. Allyn his salary, and

none of them pay their way as supporters of the Westfield Domestic Science School.

The fact stated above are backed by documentary evidence. They form a part of the story revealed through Senator Sheehan's inquiries. They present an array of misrepresentation and deceit being practised through the various phases of the Westfield proposition upon the women-folk of the country.

"Every statement on the label must be 'HONEST.'"
"Illustrations must not mislead" reads the Westfield Standard. This applies to food. If the morals of this advertising game were subjected to the same standard, where would the Westfield Standard stand.

WHAT ARE THEY GOING TO DO?

The dairy press has recently made the announcement over the signature of W. E. Skinner, Secretary of the National Dairy Council, that a fund of \$50,000 has been subscribed by men prominent in the dairy industry for the preliminary work of a big national advertising campaign to increase the production and consumption of milk, butter, buttermilk, cheese and ice cream, and further, that they expect a fund of \$750,000 to be raised for this purpose, to be expended at the rate of \$20,000 a month for 36 months.

It is with interest that we note a national campaign of this character is to be undertaken, but what is it these people expect to advertise? First, should they not put their own house in order before attempting to make statements to the public? Is this huge sum of money to be spent in false representations? Will the National Dairy Council tell the truth concerning commercial butter, or will the advertising be false, similar to that now on the billboards and in the press?

Our suggestion is that this organization, which contains the prominent dairy and creamerymen of the country, first agree on honest labels, on honest ingredients, on thorough pasteurization of all cream, on the ceasing to use neutralizer, on the ceasing from paying the same price for rotten, decomposed and putrid cream as is now paid for good cream, in fact, cease from what the more advanced creamerymen are endeavoring to do, namely, pay a differential between such cream and good cream, and agrees not to buy it at all.

Honest advertising is the current topic in food matters. The butter business, we regret to say, seems to be the greatest offender today of the food laws in its failure to comply with the laws on honest labels and honest ingredients. The creamery industry must advance to a compliance with the food laws, and then arrange to comply with the honest advertising laws. After they have made these steps and cleaned house accordingly, we believe they will be in position to spend money profitably and legitimately in advertising their wares. Until such time as these fundamental principles of modern business have been complied with, we believe it is unfair trade, dishonest, and in violation of the honest advertising laws recently placed on the statute books, to advertise creamery products as commercially made today.

The confidence of the consumer in food products is necessary to increase the volume of business. The confidence of the American public has been shaken in butter as today manufactured and market, and unless we are greatly mistaken, this confidence will be still more greatly shaken unless the creamerymen set about to correct the evils of their way.

PREVENTION OF INFANTILE PARALYSIS.

To control the present epidemic of infantile paralysis, according to a statement issued by the United States Public Health Service, the chain of infection between persons harboring germs of the disease and the well members of the community should be broken. Infantile paralysis is probably caused by a very minute organism found in the nasal, mouth and bowel discharges of those who have the disease or who are carriers of the germ without themselves suffering from the ailment. All of the steps in the spread of the infection are not known but if this germ can be prevented from passing from the infected to the well person, the disease will cease.

Poliomyelitis is probably spread directly or indirectly, through the medium of infective secretions. Account must therefore be taken by communities of every means by which such secretions are disseminated. Promiscuous expectoration should be controlled. The common drinking cup affords a method for the interchange of material of this nature and should therefore be abolished. Rigid cleanliness of glasses and utensils at soda fountains, in saloons and other public places should be enforced. Flies, roaches and other vermin, by coming in contact with infective secretions, may possibly convey them to our food and thus directly bring about the development of disease. Therefore eliminate insects. Street and house dust bear a definite relation to the spread of many infections and it is not unreasonable to presume that they may be a factor in the dissemination of infantile paralysis. Maintain strict cleanliness of streets, yards and alleys in order to prevent the breeding of insects and other vermin. See that all garbage and waste are properly cared for and collected at regular and frequent intervals. Guard all food supplies, especially milk and other perishable products. Digestive troubles of children arising from the ingestion of food of questionable quality may lower resistance. Assemblies of children in infected localities are to be discouraged, if not actually forbidden. While the above measures are in a sense general, and applicable to many epidemic diseases, their importance should not be overlooked.

Individual preventive measures may be thus summarized:

Summon a physician at once and immediately notify the health officer of the presence of the disease. If the disease is present in the community, medical aid should be sought whenever a child is sick no matter how light the illness; many cases of infantile paralysis begin with a slight indisposition. Should the illness prove to be infantile paralysis isolate the patient, place a competent person in charge, and reduce all communication with the sick room to a minimum. Hospital care is preferable, not only for the child but in order to better safeguard against the spread of the disease. The sick room should be well ventilated and screened. Nasal and mouth secretions should be received in cloths, placed in a paper bag, and burned. The clothing of the child, the bed linen, and the excretions should be disinfected in the same manner as for typhoid fever, that is by boiling, the long continued application of 5 per cent carbolic, or other well recognized disinfectant. The same is true for dishes and drinking vessels. Nurses should exercise the same precautions as regards cleanliness of hands in caring for infantile paralysis patients as for those afflicted with other infectious diseases.

Official Program for the Twentieth Annual Convention of the Association of American Dairy Food and Drug Officials—Detroit, Mich., Aug. 7, 8, 9, 10 and 11

HEADQUARTERS: HOTEL STATLER. PLACE OF MEETING: BANQUET HALL, HOTEL STATLER.

"We think that the change from the past two or three years when the trade was assigned a day or an afternoon, is going to be very interesting. There will be no afternoon or day for the trade this year, but you will notice by the program that after every committee report and paper there will be a discussion, in some instances by men especially mentioned and always by the commissioners and followed by the trade. This gives the trade an opportunity to discuss every paper, and we figure that by so doing, the commissioners will get a better idea of the viewpoint of the trade; that manufacturers and dealers are in possession of a good deal of information and many facts that the commissioners would like to have; and the trade will get the viewpoint of the commissioners; again, that the commissioners and trade will get the viewpoint of their colleagues; and before the discussion is ended on each and every paper, a great deal of interesting information will be released that should benefit everybody, and if it would tend towards a better understanding and more uniformity, it will be well worth while. We anticipate that the trade will be especially interested in this feature and that men of special knowledge pertaining to certain papers will be present to take part in the discussion; and that others, if they are not specially prepared, will be deeply interested."

OFFICERS.

W. B. Barney, President, Iowa.
H. C. Smith, 1st Vice-President, Utah.
R. E. Rose, 2nd Vice-President, Florida.
J. J. Farrell, 3rd Vice-President, Minnesota.
Frank A. Jackson, Treasurer, Rhode Island.
John B. Newman, Secretary, Illinois.

EXECUTIVE COMMITTEE.

The President and Secretary; E. F. Ladd, North Dakota;
S. J. Crumbine, Kansas; James Foust, Pennsylvania.

COMMITTEE ON CO-OPERATION.

Hon. W. Scott Matthews, Illinois.
Dr. J. S. Abbott, Washington.
Dr. W. M. Allen, North Carolina.

PROGRAM.

MONDAY, AUGUST 7.

10 A. M.—

Invocation.
Roll call by Secretary.
Address of welcome by Gov. Woodbridge N. Ferris.
Address of welcome by Mayor Oscar B. Marx.
Response to address of welcome.
Appointment of committees by the President.
Report of the Secretary.
Report of the Treasurer.
Announcements.
Adjourn for luncheon.

2 P. M.—

Report of Credentials Committee.
President's address.
Amendments to constitution or by-laws.

3 P. M.—

Sectional meetings of the executives, Sec. A; and chemists,
Sec. B.

TUESDAY, AUGUST 8.

10 A. M.—

Paper—"Toxicity of Tin in Foods," by Mr. W. Salant, in

charge U. S. Pharmacological Laboratory.

Discussion.

Paper—"Do We Get Best Results by Education or Prosecution?" by Dr. Carl L. Alsberg, Chief of the Bureau of Chemistry, Washington, D. C.

Discussion by Commissioner Geo. J. Weigle of Wisconsin.

Discussion by Commissioners.

Discussion by trade.

Report of Committee on Co-operation, by Chairman W. S. Matthews, Food and Dairy Commissioner, Illinois.

Discussion led by Dr. J. S. Abbott, State Co-operative Food and Drug Department Washington, D. C.

Discussion by Commissioners.

Discussion by trade.

Adjourn for luncheon.

2 P. M.—

Guests of the Parke Davis Wholesale Drug House; inspection of their establishment by the delegates and all others in attendance at the convention.

8 P. M.—

Sectional meetings of the executives, Sec. A; and chemists,
Sec. B.

WEDNESDAY, AUGUST 9.

10 A. M.—

Report of Committee on Drug Deterioration by Dr. Chas. Caspari, Jr., Commissioner, Maryland.

Discussion by Commissioners.

Discussion by Dr. J. M. Francis of Parke Davis Company.

Discussion by trade.

Report of Committee on False Advertising, by Commissioner Geo. L. Flanders, Attorney, Department of Agriculture, New York.

Discussion by Commissioners.

Discussion by trade.

Malnutrition Through Errors in the Combination of Foods. (Illustrated lecture.) Prof. E. V. McCollum, University of Wisconsin. Discussion by J. T. Willard, Food Analyst, Kansas State Board of Health, Manhattan, Kan.

Discussion by Commissioners.

Discussion by trade.

Adjourn for luncheon.

2 P. M.—

Report of Committee on the Assembling of Literature on Devitalized Foods in Their Relation to Nutritional Disorders, Dr. S. J. Crumbine, Chairman, Secretary State Board of Health, Kansas.

Address, "Vitamines, Devitalized Foods, Nutritional Disorders," by Dr. Carl Voegtlin, U. S. Health Service.

Discussion by Commissioners.

Discussion by trade.

Paper—"Tolerances in Weight and Measures in Food and Drug Control Work," by Commissioner Jas. Helme, Dairy and Food Commissioner of Michigan.

Discussion by Commissioners.

Discussion by trade.

THURSDAY, AUGUST 10.

10 A. M.—

Report of Committee on Conservation of Food Flavors, by Commissioner James Foust, Chairman, Food and Dairy Commissioner, Pennsylvania.

Discussion by Commissioners.

Discussion by trade.

Paper—"Food Control and the Pure Food Propagandists," by Miss Helen Louise Johnson, Watertown, N. Y., Chairman of Home Economics of the General Federation of Woman's Clubs. Special invitation to the Women's Clubs of the country at this session as well as to all other sessions of the convention.

Paper—"Sanitation and Food Control Work," by Commissioner Guy G. Frary, Food and Drug Commissioner, South Dakota.

Discussion by Commissioners.

Discussion by trade, lead by James H. Wallis.

Adjourn for luncheon.

2 P. M.—

Paper—"Public Health in Relation to Food and Drug Control," by Dr. Price, Health Commissioner of Detroit.

Discussion by Dr. Herman C. Lythgoe of Massachusetts.

Discussion by Commissioners.

Discussion by trade.

Demonstration of Sterilizer for Farm Utensils, by Dr. George B. Taylor, Market Milk Specialist, Dairy Division, Department of Agriculture, Washington, D. C.

Report of Egg Committee continued from last year, by J. B. Newman, Chairman, Assistant Food and Dairy Commissioner, Illinois.

Discussion by Commissioners.

Discussion by trade.

Report of Committee on "Swells and Springers in Canned Goods," by Dr. L. M. Tolman, Chief Central Division Federal Food and Drug Department.

Discussion by Commissioners.

Discussion by trade.

8 P. M.—

Sectional meetings of the executives, Sec. A; and chemists, Sec. B.

FRIDAY, AUGUST 11.

10 A. M.—

Report of Committee appointed to report upon "The Feasibility of a Uniform Law to Enact a Requirement for the Physical Examination of Employes Handling Food Products," by Commissioner Oscar Dowling, Chairman, Louisiana.

Discussion by Commissioners.

Discussion by trade.

Selection of next meeting place of Association.

Report of Resolution Committee.

Report of Nominating Committee.

Election of officers.

SECTION A.

State Food and Dairy Executives.

OFFICERS.

President, F. A. Jackson, Rhode Island.

Vice-President, Maurice Groshen, Wyoming.

Secretary, S. C. Dinsmore, Nevada.

Treasurer, Geo. J. Weigle, Wisconsin.

EXECUTIVE COMMITTEE.

Dr. E. F. Ladd, North Dakota.

Guy G. Frary, South Dakota.

A. M. G. Soule, Maine.

MONDAY, AUGUST 7.

3 P. M.—

Annual address by President.

Report of Secretary.

Report of Treasurer.

1. C. L. Alsberg, Chief of the Bureau of Chemistry, Washington, D. C., "Administration Problems and Their Solutions."

Dr. E. F. Ladd of North Dakota to lead the discussion.

2. Heber C. Smith, Dairy & Food Commissioner, Salt Lake City, Utah, "Control of Sanitary Conditions of Groceries and Markets."

G. G. Frary, South Dakota, Food and Drug Commissioner, to lead the discussion.

3. Dr. H. E. Barnard, Food and Drug Commissioner, Indianapolis, Ind., "Field Work and Its Control."

A. M. G. Soule, Chief Inspector, Augusta, Maine, to lead the discussion.

SECTION A. ROUND TABLE DISCUSSION.

TUESDAY, AUGUST 8.

8 P. M.—

1. Food and Drug Control Work enacted during the year in the several states.

2. The weakness or strength of any provisions.

The influence which helped to secure their adoption.

The character of and the reason for any opposition.

3. The cost of the work of inspection in order to cover a given territory or number of dairies, bakeries, slaughterhouses, grocery stores and restaurants.

4. The best plans for administration and its cost.

5. Training and experience to be expected in the appointment of inspectors.

6. Methods employed in the states by which active and permanent co-operation from the trade has been secured.

7. How can we as food executives adopt co-operation on a basis upon which better uniformity can be obtained in our laws.

THURSDAY, AUGUST 10.

3:30 P. M.—

1. F. Webster Cook, Food and Drug Commissioner, Providence, R. I., "The Organization of Prosecution."

George L. Flanders, Counsel of the Department of Agriculture, Albany, N. Y., to lead the discussion.

2. John Phillips Street, Chief in Charge of Laboratory, New Haven, Conn., "What Shall We Do with Our Skim Milk?"

Dr. C. L. Alsberg, Chief of the Bureau of Chemistry, Washington, D. C., to lead the discussion.

3. Election of officers.

SECTION B.

Association of Official and Drug Chemists.

OFFICERS.

President, H. E. Barnard, Indiana.

Vice-President, George B. Taylor, Washington, D. C.

Secretary, Fern L. Shannon, Michigan.

MONDAY, AUGUST 7.

3 P. M.—

1. President's address.

2. The Pharmacopœa of the U. S. and the New Standards Therein, by Prof. L. E. Sayre, University of Kansas.

3. The Relation of Composition to Quality of Cheese, by Dr. James N. Currie, Bureau of Animal Industry.

4. Glue and Gelatin, by Carolton Bates, Chief Chemist, American Glue Co.

5. Notes on the Testing of Homeogenized Cream for Butter Fat, by W. M. Cobleigh, State Chemist, Montana.

6. A Comparison of the Composition of Commercial Extracts with Those Made in a Chemical Laboratory, by W. S. Long and E. H. S. Bailey, University of Kansas.

Adjourn until Tuesday, 8 p. m.

TUESDAY, AUGUST 8.

8 P. M.—

1. The Inspection of Canned Foods, by Dr. W. D. Bigelow, Chief Chemist, National Canners' Association, Washington, D. C.

2. Some Inexpensive Laboratory Apparatus, by H. Louis Jackson, State Chemist, Idaho.

3. State Milk Survey as a Means of Improving Municipal Supplies, by David Klein, State Analyst, State Food Department, Illinois.

4. The Milk Problem of the Village and Small City, by C. F. Whitney, State Chemist, Vermont.

THURSDAY, AUGUST 10.

3:30 P. M.—

1. The identification and Estimation of Lactic Acids in Biological Products, by I. K. Phelps and H. E. Palmer, Bureau of Chemistry, Washington, D. C.

2. The Determination of Nitrogen in Azo and Hydrazine Compounds, by I. K. Phelps and H. W. Daudt, Bureau of Chemistry, Washington, D. C.

3. Tin in Canned Foods, by W. D. Bigelow, Chemist, National Canners' Association, Washington, D. C.

4. Election of officers

Remarks of Harry L. Eskew, Food and Drug Commissioner of Tennessee, Before Recent Convention of United Commercial Travelers at Columbus, O.

SUPREME Counselor and Brother Counselors: Twelve or fifteen years ago I started out on the road. I wanted to join a traveling men's organization, and I did not know which one I wanted to join, and which it was best for me to join. I made up my mind that I would examine the men and the buttons the men wore. It did not take me very long to know that the United Commercial Travelers was the organization. (Applause.) I have never regretted that move for one minute. I tell you the trip from Nashville to Columbus, to come here and sit and watch the deliberations of these men, was worth all it cost. It just makes my heart swell with pride to know that this great organization of ours is so well taken care of.

Supreme Counselor, there are a great many times when we wonder how we can increase the membership of this organization. Get the rank and file of the United Commercial Travelers to fully understand the deliberations of this body, how business-like they are accomplished, we would have a twenty-five per cent increase in one year's time.

As food and drug commissioner of Tennessee, I have the enforcement of the hotel laws of that state. I would like for you counselors when you go back to your grand jurisdictions to deliver a message to your subordinate councils, first, you have not a state law, create one. When you get the law place it in the hands of a good man, and third, and last, but not least, co-operate with him. That is the hardest thing that I have to do, is to get the co-operation of the traveler. I believe in another year in the state of Tennessee I will have six thousand inspectors, and that will mean the six thousand men residing in the state of Tennessee. You can not accomplish anything if you sit still. Create your law. Put your man in. Do not talk about him on the railroad train and in the hotel lobbies alone, but let him know what you want. That is the fight I have all the time. They do not come to headquarters with complaints. I believe if there are any other hotel commissioners here they will tell you the same thing. The average traveling man is given to complaining, but he does not complain to headquarters. Try co-operating with the head of your department; make him understand what you want; see that he does it; and if he does not, put him out; but first let him know.

The State of Tennessee has, I think, hotel laws that are second to none in the United States. They are backed up by our sanitary food law. In other words, we can enforce a hotel to make improvements under the hotel law. We go after them without gloves. We send them a notice and give them time to clean up, and if they don't we close them, and I have closed ten hotels in the last six months in the state of Tennessee.

Why am I able to do that? Because every traveling man residing in the state of Tennessee is back of me and we are getting results. But you cannot expect your commissioner to do everything, as I said before, if you sit in trains and hotel lobbies and do not let him know what you want him to do.

I am interested in some national legislation. I was indeed glad to appear before you in regard to better dairy products. I believe I wrote a letter to the secretaries of all subordinate councils as well as of grand councils. There seems to have been some misunderstanding throughout the entire country that I was fostering certain interests, or in other words, the oleomargarine interests. I wish now to brand that as a malicious falsehood. I am only after better butter than we are having now. I do not mean to say that the dairy interests and

conditions in this country are not greatly improved. They are, and they are to be complimented greatly for it. But until we have Federal inspection of dairy products we are not able to know what we are getting. I do not believe that butter should be put on the market colored unless it states it is artificially colored. The food officials of the United States will not let some products go on the market even when it is stated. Why should we permit a housewife to turn out the very worst class of butter and color it up? The State officials can take care of that, but they cannot take care of interstate shipments. That is what we want. The resolution simply asks that Congress appoint a committee of five to investigate the dairy conditions of this country, and see whether or not legislation is necessary. It does not mean even that laws will be enacted.

It has been said to me, "Oh, yes, that is for the interests of the oleomargarine people." I say to you that I do not believe it, and I further say to you if the bill is enacted and it permits any other interests to come in with an inferior product, I shall fight it as hard as I am fighting for better dairy products.

Another argument is, "You state officials admit you are incapable of inspecting your own product." I do admit it. It would take a thousand inspectors in the state of Tennessee to corral every pound of butter. It is the huckster, going through the country, getting a pound of butter here and a pound of butter there, from the careless housewife, from the negro, where it is kept in a tub with perhaps a couple of chickens roosting on top of the tub, from whose hands it goes into renovating plants and then into interstate commerce.

I take it up with the traveling man because I believe he is vitally interested. He goes to the hotels and buys that butter. I believe it was to his interest to bring this about, and if any one says that Eskew is interested because he wants to help any particular interest, he is either mistaken or telling a malicious lie. I want better dairy products, and I believe the only way we can get them is through Federal inspection. I thank you.

ACTION AGAINST CANNERS.

United States Marshal Nicholas Reed, at the instigation of government agents connected with the pure food department of the United States, has seized 17,340 cans of beans in various parts of the state of Iowa which are now being held until it has been determined in the Federal court whether the beans can be given a clean bill of health.

In all 578 cases, containing on an average of thirty cans to the case, are being held by the government officials. Through United States Attorney Claude R. Porter, a libel action was filed recently against the goods. The hearing on the beans probably will be held before Judge Martin J. Wade in the near future.

According to the pure food men the beans do not come up to the standard of food as required by the government laws.

Three hundred and eighty cases of "Manna's Choice" brand of beans were captured at Ottumwa; 168 cases of "Harvest Treasure" were seized at Keokuk, and twenty-three cases of "Frisco Brand Luncheon Beans" were taken at Davenport.

"Since the war has been raging in Europe the first grade beans have been leaving the United States for the war zone," said a government man last night. "The beans seized, we allege, are made up of what is termed 'seconds,' the kind that formerly was ground up for chicken feed."



Notes from Field of Food Control



COMMISSIONER MATTHEWS of Illinois has sent out the following notice: As the law against the sale of veal from immature calves or calves less than four weeks old, is to be strictly enforced beginning August 1, as the result of a decision of Dr. John Dill Robertson, head of the Chicago Health Department to co-operate with this department, I feel it no more than right that farmers in the communities of this state should receive some kind of notification. Therefore, I am carrying this out, so far as I am able, by sending out this letter and enclosures to the editors of publications in this state.

You will find enclosed a copy of the formal order issued by the Chicago Health Department, and also for your own convenience in handling, a short introduction to the same.

If you see fit to publish this in any form that best suits your purposes, will you be kind enough to mail me a marked copy?

Yours very truly,

W. S. MATTHEWS, Commissioner.

VEAL.

A crusade against the sale of immature veal is to be instituted by the Health Department of Chicago. City inspectors are instructed to co-operate with the state authorities in the enforcement of the law, and to confiscate the carcasses of calves less than four weeks old shipped into Chicago for the purpose of sale.

A decision to this effect was reached at a conference between Dr. John Dill Robertson, Health Commissioner for Chicago, and W. Scott Matthews, Illinois Dairy and Food Commissioner. Strict watch will be kept at all packing houses under the city's jurisdiction and all platforms and railroad stations where meat is shipped in to the retail butchers.

Evidence obtained by the city inspectors will be turned over to the state authorities for prosecution. The Health Department's order, which takes effect August 1, reads as follows:

IMMATURE VEAL LAW

To Be Enforced by the City Health Department in Co-operation with the State Authorities.

The law against the sale of veal from immature calves or calves less than four weeks old will be strictly enforced within the city of Chicago. This applies to the enforcement of the City Ordinance as well as the State law.

This Department will co-operate with officials of the Illinois Dairy and Food Department to prevent the sale of veal that comes within the four-week-old limit specified in the Statutes.

The State law reads as follows:

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: That if any person kills, or causes to be killed, for the purpose of sale, any immature calf or any calf less than four weeks old, or knowingly sells or has in his possession with intent to sell for food, the meat of any immature calf, or any calf less than four weeks old, he shall be guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than \$25, nor more than \$50, or by imprisonment in the county jail not exceeding 30 days, or by both fine and imprisonment, and all such meat exposed for sale or kept with intent to sell, may be seized and destroyed by any health officer, or any sheriff or deputy sheriff, constable or police officer.

That part of the City Ordinance relating to the sale of veal, under Section 1361, reads:

"No person or corporation shall bring into, sell or offer for sale in the city for human food, any calf, or any part of the meat thereof which at the time it was killed was less than four weeks old."

All veal under the four-weeks-age limit shipped into Chicago for the purposes of sale, will be confiscated and the evidence turned over to the State authorities for prosecution. Inspectors for the Department of Health of the city of Chi-

cago are so notified and are instructed to report all violations at once. This order takes effect August 1, 1916.

DR. ALBERT J. STOKES,

Chief of the Bureau of Food Inspection, Department of Health, Chicago, Illinois.

SMITH SEEKS AMENDMENT.

Heber C. Smith, state dairy and food commissioner of Utah, will ask the legislature at the next session to amend the pure food law to prohibit the offering for sale of foods that have been exposed to contamination from flies or other sources of impurity.

Commissioner Smith will also endeavor to have written into the law definitions of such terms as adulteration, contamination, filthy, etc., that purity of food may be more closely safeguarded.

OHIO WINE GROWERS PROTEST.

Ohio wine growers from the Sandusky region were heard recently in protest against the alleged discrimination in favor of California wines contained in the new revenue bill.

The bill seeks to impose a super-tax of 24 cents a gallon on cordials and certain wines and is drawn in a way to exclude California wines, the Ohio products falling in the taxed class.

TO FIGHT PTOMAINIE MYTH.

The research committee of the National Canners' Association has undertaken to stamp out another popular myth affecting canned foods, by proving through scientific investigation that ptomaine poisoning from canned foods is impossible. According to Chairman Henry Burden of the committee, it will require approximately \$30,000 per year for three years to pursue this study to an end, and a pledge for this amount is being circulated for signatures. Many canners put their names down for large sums at the recent executive committee meeting and it is still open. With this myth officially laid at rest there will be nothing left to attack canned foods with.

500,000,000 BACTERIA.

The Society for the Prevention of Cruelty to Animals should have taken action in the case of Angelo Ganginni, a grocer of Philadelphia, for his mistreatment of bacteria, according to Prof. Charles H. La Wall, chemist of the State Dairy and Food Bureau. Ganginni, among a number of other grocermen, was arraigned before Magistrate Harris, 3726 Market street, recently on the charge of selling impure and decomposed food products.

In referring to Ganginni's case Professor La Wall said: "It was absolutely shameful the way the bacteria were crowded in the tomato cans. Not only were the tomatoes decomposed before they were put up, but there was so much bacteria that the Society for the Prevention of Cruelty to Animals should have stepped in, charging cruelty, so overcrowded were the poor things. One sample contained 500,000,000 bacteria to the teaspoonful."

BAD EGG THE TARGET.

Announcement comes from Washington that this season the federal pure food law will be enforced as it relates to eggs. Under the law eggs, in common with other articles of food, are adulterated if they consist wholly or in part of a filthy, decomposed or putrid substance. Section 2 of the act prohibits the shipment in interstate commerce of foods which are adulterated and it is held that this prohibition applies to the shipment in interstate commerce of "current receipts" or of "rejects" from candling rooms or of any other grade of egg in the shell unless the filthy, decomposed or putrid eggs have been removed. The department will allow some margin, but eggs that candle more than 5 per cent bad will come under the ban.

Offenders can be prosecuted criminally under Section 2 of the food and drugs act, the penalty of which is a fine of \$200

for the first offense and a fine of \$300 for subsequent offenses or imprisonment of not exceeding one year. The eggs can be seized and a civil action placed against the owner by the government.

The enforcement of the law will be welcomed by the trade as its influence will be to eliminate poor eggs. Instead of holding her eggs during the summer months to market them when the prices are higher in the fall the farmer's wife will bring them in while fresh and the country merchant will have to ship promptly.

TO REGULATE ICE CREAM.

The New York Department of Health has taken steps to rigidly control the character of ice cream and its ingredients, manufactured in this city or brought here for sale, and to that end has adopted the following regulations:

"Regulation 1. Can or Receptacle to Be Labeled.—Each can or other receptacle containing ice cream, which is used in the transportation or delivery of ice cream, shall have affixed thereto a label, upon which said label the name of the manufacturer and the date and place of manufacture shall be clearly and legibly set forth.

"Regulation 2. Ingredients.—All ingredients used in the manufacture of ice cream, except flavors, fruits and sweeteners, shall be pasteurized in accordance with the regulations of the Board of Health governing the pasteurization of milk and cream or subjected to a temperature of 212 degrees Fahrenheit for not less than two minutes.

"Regulation 3. Butter Homogenized with Milk or Skim Milk Powder to Be Labeled.—Ice cream manufactured from butter homogenized with milk or skim milk powder in water shall bear a statement on the label that such ice cream has been manufactured from butter homogenized with milk or skim milk powder.

"Regulation 4. Excessive Bacterial Count.—Ice cream containing an excessive number of bacteria shall not be brought into or held, kept or offered for sale in the city of New York.

"Regulation 5. Ice Cream Not to Be Falsely Labeled.—Ice cream sold or offered for sale under a designation signifying the grade of milk or cream from which it is manufactured shall not be manufactured from any grade of milk or cream other than that designated.

"Regulation 6. Ice Cream to Be Kept Frozen.—Ice cream after being frozen must be kept frozen until dispensed."

BENZOIC ACID ADULTERATED.

Recent examinations by the chemists engaged in the enforcement of the Food and Drugs Act of shipments of benzoic acid offered for entry into the United States have revealed that much of it is adulterated with boric acid. This adulteration is probably due to the high price which benzoic acid now commands owing to its scarcity. It is quoted at about eleven dollars per pound, while the price of high grade boric acid is only twenty to twenty-five cents per pound. As some of the shipments of benzoic acid have been found to contain as much as thirty per cent boric acid, the enormous profit in this form of adulteration is apparent.

The officials in charge of the enforcement of the Food and Drugs Act are of the opinion that benzoic acid containing boric acid is adulterated, and that shipments of such a mixture offered for entry into the United States should be denied admission under the Food and Drugs Act.

UNLABELED CANNED GOODS.

The Department of Agriculture has been requested to define its position with respect to the application of the Net Weight Amendment to the Federal Food and Drugs Act to the transportation in interstate commerce of unlabeled canned goods. A modification of a former opinion, issued May 12, 1916, has been asked for and, upon reconsideration, the Department has issued the following announcement:

"Until further notice the Department will not recommend proceedings under the Food and Drugs Act on account of the shipment in interstate commerce, or the sale in the District of Columbia or the territories, of unlabeled canned foods solely upon the ground that the same do not bear a statement of the quantity of the contents, if such shipment or sale be other

than to a retail dealer or to a consumer and the cans bear a correct statement of the quantity of the contents when sold or delivered to retail dealers and consumers. If investigation discloses that failure to mark the quantity of the contents on unlabeled cans affords means to defraud or to defeat the purposes of the Act, it will be the duty of the Department to recommend proceedings and reasonable notice to that effect will be given."

TODD NOW STATE ANALYST.

A. R. Todd has been appointed to succeed F. L. Shannon as state analyst of Michigan. He has been connected with the Michigan Dairy and Food Department for four years, having held the position of State Drug Analyst through both a Republican and a Democratic administration, and was appointed by former Commissioner G. M. Dame.

The work of Drug Analyst covers an average of 650 samples of drugs annually and aside from this Mr. Todd has served as technical adviser to the Weights and Measure Division.

The Department employs some 32 members and spends annually about \$50,000. There is an average of 2,000 food and drug samples analyzed annually by the Department and the salary of the Commissioner, as well as that of the State Analyst, is fixed by law at \$2,000.

Mr. Todd, after graduating from High School at Welsh, Louisiana, attended Trinity College at Waxahachie, Texas, for one year, and is a graduate of Valparaiso University and also of the University of Michigan, holding the title of Ph. g., Ph. C., and B. S. in Pharmacy and Chemistry.

QUARANTINE AGAINST CORN.

The Secretary of Agriculture has announced an extension of the quarantine against Indian corn from the Orient to cover all of southeastern Asia (including India, Siam, Indo-China and China), Malayan Archipelago, Australia, New Zealand, Oceania, Philippine Islands, Formosa, Japan, and adjacent islands. The importation is prohibited of seed and all other portion of maize and closely related plants, including all species of *Teosinte* (*Euchlaena*), *Job's tears* (*Coix*), *Polytoca*, *Chinoachne* and *Sclerachne*.

NOTICE TO WINE MAKERS.

The Internal Revenue Office has reversed a recent ruling inhibiting the use of condensed grape must for purposes other than to sweeten the wines in which it is added. Joseph J. Scott, collector of internal revenue, says in a new order issued: "Until other instructions are issued wine makers, gaugers, etc., should see to it that the wines to which have been added sweetened grape must prior to, or during, fermentation, are especially marked for future identification and kept apart from other wines. The attention of wine makers, gaugers and others is called to the provision contained on page 17, regulation No. 28, of May 14, 1913, governing the storage and control of condensed must and other sweetening agents. There must be strict adherence to these regulations." The Lodi Sentinel of California reported in a recent issue that Lodi wineries had installed machines to make the sirup, which was destined to cut down the cost of wine making. Grapes testing 22 per cent will produce 11 per cent alcohol, making it necessary to add 9 per cent of alcohol to bring the wine up to the standard of 20 per cent. What the wineries proposed to do was to bring the sugar test up to 30 by the addition of sirup, which would produce 15 per cent alcohol, making it necessary to add but 5 per cent alcohol upon which they would have to pay the 55-cent tax. Now that the Internal Revenue Office has given a favorable ruling in this connection, there will be a great saving effected. The action of the Internal Revenue Office in Washington, restoring the right to use condensed grape must in proper quantities to bring the wine up to a commercial standard, has the effect of holding the entire matter in abeyance, and a final decision will be made after full consideration by the commissioner. It is unlikely that when this decision is made any tax will be imposed on the makers of those wines that have been ordered to be marked for future identification.



Consular Trade Notes and Brevities



THE FISHERIES OF BRAZIL.

Considerable attention has been attracted in official circles by the information that the Ministry of Agriculture here has intrusted one of its officials, Dr. Affonso Costa, with the compilation of an extensive report on the fisheries of Brazil. Such advance information as is available is to the effect that the report will touch upon the following points:

The methods by which the fisheries are conducted in Brazil are extremely rudimentary and antiquated. Very little attention is paid to conservation, the country being accustomed to find fish in all its rivers and along all its coasts in great variety and quantity.

In Amazonas the product of the fisheries is said to amount annually to 220,000,000 kilos (485,016,900 pounds), with a value of \$500,000 to \$600,000 United States gold; none the less Amazonas annually imports \$62,500 worth of salted codfish and \$52,500 worth of preserved fish of other sorts. Para, which in a sense should subsist upon the Amazonas fisheries, imported in 1913 \$145,000 worth of salted codfish and \$79,250 worth of other preserved fish from abroad.

The above, of course, refers to river fisheries. As to sea fisheries, there are no official statistics, but it is known that the Santos Fisheries Co. during 1914 sold, in Sao Paulo and Rio de Janeiro, about \$200,000 worth of sea fish.

AMERICAN SEED FOR ONTARIO.

Seeds are exported from Prince Edward County, in the Kingston consular district, to all parts of the world. This year, however, grass and all other seeds are being imported from the United States, and importers state that the demand is so great that they experienced difficulty in filling orders. The shortage of seeds is attributable principally to unfavorable weather conditions, lack of labor, and less acreage grown.

More seeds will be planted this spring than ever before; vegetables of all kinds are to be raised. The canneries in this district have disposed of last year's surplus stock and with orders now on hand for the coming season, they will be kept very busy. The canning industry of Prince Edward County is the principal and most important of its kind in the Province of Ontario.

SUGAR IN SWITZERLAND.

A citizen of Berne who is interested in the importation of sugar [and whose address may be obtained from the Bureau of Foreign and Domestic Commerce or its district offices by asking for file No. 75584] estimates the present demand in Switzerland at 6,000 to 8,000 tons a month; the normal needs he places at 10,000 to 12,000 tons. The trade is now regulated by the Swiss Government, which through the Societe Suisse de Surveillance controls the purchase and itself fixes the price of sugar.

According to the Berne branch of the Konsumgenossenschaft—the largest importing wholesale and retail co-operative association dealing in groceries and colonial products, with headquarters in Basel and branch offices and stores throughout Switzerland—the present wholesale sugar prices as fixed by the Government, for at least 10 tons of a single quality and delivered at one place, are 79 to 85 francs per 100 kilos (\$6.90 to \$7.44 per 100 pounds). Retail prices are from 12 to 20 per cent higher. The Provisions Association of the city of Zurich has published a table of 29 articles of food and household consumption, comparing prices on June 1, 1914, and March 1, 1916. It strikingly illustrates the change in the household problem that has developed during the war, in the chief city of this neutral oasis. Only one of the 29 articles has decreased in price—honey. Only two cost the same—cooking chocolate and tea. The 26 others show increases of from 3 to 175 per cent, and an average of 71 per cent.

Honey dropped from 77.2 cents to 73.3 cents a kilo (2.2 pounds). The articles higher in price were: Briquettes, cheese, coffee, sesame oil, butter, cocoa butter, flour, petroleum, bread, lard (American), eggs, potatoes, fuel alcohol, soap (first qual-

ity), lentils, cornmeal, rice (Italian), groats, rice (Indian), sugar (broken loaf), beans, oat flakes, hulled oats, and barley.

Meats, milk and clothing also cost more. These increases in living expense are general in all of Switzerland.

BOOK FOR EXPORTERS.

A large amount of practical information for American business men is contained in a bulletin, "Export Trade Suggestions," issued by the Bureau of Foreign and Domestic Commerce. The most difficult of the problems that have arisen during the past two years have a conspicuous place in the book, while the entire volume affords a wide variety of subjects. Among the topics presented are export policies, representatives and agencies, finances and credit, quotations, postal services, correspondence and translations, co-operation with consuls, packing, advertising, and general trade extension. Contributions are included from consuls, commercial attaches, traveling special agents, special agents in charge of district offices of the Bureau, and from Dr. E. E. Pratt, chief of the Bureau.

The new bulletin is Miscellaneous Series No. 35, and it contains 141 pages. Copies may be purchased at the nominal price of 15 cents each from the Superintendent of Documents, Washington, D. C., or from the district offices of the Bureau.

MERCHANTABLE CROPS OF CANADA.

Of Canada's total estimated wheat crop in 1915 of 376,303,600 bushels, over 95 per cent, or 358,281,000 bushels, proved to be of merchantable quality. This proportion compares well with the previous years, being superior to 1914 by about 2 per cent, and somewhat above the average of the past seven years, suggests a bulletin of the Canadian Census and Statistics Office. The proportions of other crops of 1915 which proved to be of merchantable quality are as follows: Oats, 92 per cent (480,208,000 bushels out of 520,103,000 bushels); barley, 88 per cent (47,082,000 bushels out of 53,331,300 bushels); rye, 88.5 per cent (2,118,500 bushels out of 2,394,100 bushels); buckwheat, 83 per cent (6,512,000 bushels out of 7,865,900 bushels); corn for husking, 77.5 per cent (11,142,000 bushels out of 14,368,000 bushels); flaxseed, 95.5 per cent (10,144,000 bushels out of 10,628,000 bushels); potatoes, 73 per cent (45,630,000 bushels out of 62,604,000 bushels); turnips, etc., 86 per cent (55,266,000 bushels out of 64,281,000 bushels); and hay and clover, 86 per cent (9,400,000 tons out of 10,953,000 tons).

POTASH FROM BANANA STALKS.

At a meeting of the Yorkshire section of the Society of Chemical Industry held in Leeds on March 27, 1916, an interesting paper was read by Mr. R. H. Ellis, of Selby. In view of the stoppage of imports from Germany this country is suffering from a shortage of potash supplies, and Mr. Ellis said that at the suggestion of Mr. E. E. Lawson, of Leeds, he made an examination of the banana stalk, with a view to the use of its fiber for pulp for paper making and possibly in other directions.

During the examination he noticed that the juice was sufficiently alkaline to cause irritant action on the skin, and this led him to examine it further, with the result that he found there was present a large percentage of potash and practically no soda. His analysis had been confirmed by Dr. A. J. Hanley, the Agricultural Department of the Leeds University. In fact, the figures showed that the dried matter of the original stalk was as rich in potash as kainit. According to his analysis a ton of banana stalks would yield 188 pounds of dried matter containing 13.7 per cent of potash, or 54 pounds of the Agricultural Department of the Leeds University. In pure potash.

STALKS AVAILABLE FOR USAGE—ANALYSIS.

"Considering that large quantities of banana stalks come into the country every week," added Mr. Ellis, "and that there

is a great demand for potash and practically no supplies for agricultural purposes, the question of this refuse is worth the attention of municipal sanitary authorities. I am told that over 4,000 stalks come into Leeds every week. When stripped they have an average weight of 4 pounds each, or 16,000 pounds in all, representing 1,340 pounds (about 12 hundredweight) of dried matter as rich in potash as kainit."

[This source of potash is chiefly of interest on account of the ease with which potassium carbonate, mixed with small amounts of the chloride and sulphate, but practically free from sodium compounds, may be secured in a somewhat limited amount. The complete analysis of the ash yielded by banana stalks is as follows: Silica, 9.61; oxide of iron, 0.16; alumina, 3.49; lime, 1.69; magnesia, 1.68; potash, 45.90; soda, trace; sulphuric acid, 2.10; carbonic acid, 31.11; chlorine, 1.52; phosphoric acid, 2.74. It is to be noted that the dried banana stalks contain about two-thirds of the amount of potash present in the dried kelp of our Pacific coast. For use as a fertilizer the material is, therefore, notably inferior to this great American source. It is practically equivalent in value as a fertilizer to the drift weed found off the coasts of Great Britain and Norway. As a source for the technical preparation of pure potassium compounds, it apparently presents marked advantages over all other known sources in the vegetable kingdom.

PAPER AND WOOD-PULP.

An increase of 24.1 per cent in the total value of the paper and wood-pulp production in this country between 1909 and 1914 is reported by the United States Bureau of the Census, notwithstanding the fact that in the same period the number of establishments in that industry in the United States decreased from 777 to 718. Besides the concerns primarily interested in paper and wood pulp, reports were also received from 9 establishments in 1914 and 15 in 1909 which were engaged primarily in the manufacture of other products, such as paper boxes and roofing material, and produced paper only as an intermediate or subsidiary product.

The production of wood pulp in 1914 amounted to 2,894,650 tons, as compared with 2,498,955 tons in 1909, the increase being 15.8 per cent. In addition to the domestic production there were used 534,395 tons of imported pulp in 1914 and 301,392 tons in 1909, the increase for this item being 77.3 per cent.

SOAP NOW A BY-PRODUCT.

The relegation of soap to the category of by-products of soap factories is one of the anomalies wrought by the war in Europe. Glycerin is now the product of chief value made at British soap works, although its manufacture is only incidental to the soap-making processes. This reversal of the accepted order of things has been due, of course, to the demand for glycerin in the manufacture of munitions, of which it is an important constituent; and British soap makers are faced with the necessity of finding new or larger outlets for their wares, not so much, in the first instance, to sell more soap as to secure an increased yield of glycerin.

The above-mentioned features were brought out in an address made at the annual meeting of a large Glasgow soap company, in which the speaker, in reviewing the present status of the British soap industry, called attention to the rise in the price of raw materials and stated:

In ordinary circumstances soap makers would have been fully justified in advancing the price of soap proportionately to the rise in raw materials, particularly as last October the Government commandeered the supplies of glycerin produced in this country at a price that was then considered fair and reasonable, but owing to the great scarcity of freights the raw materials required for soap making have advanced to such an extent that the cost of soap has, within about a year, increased by £13 10c. [\$65.70] per ton. As, however, any rise in the price of domestic soap would undoubtedly have had the effect of increasing imports, thereby displacing English soaps and consequently reducing the production of glycerin, the trade decided to await the assistance of the Government in preventing large quantities of soaps from being dumped into

this country, as it was feared would occur should a substantial advance in the price of soap be made here. * * * As each ton of soap imported means a reduction of at least 1 hundredweight in the output of British glycerin, it behooves everyone to decline to purchase imported soaps and to insist on getting British-made goods only.

POULTRY IN PORTO RICO.

There is a considerable field in Porto Rico for raising poultry for the local market. An ordinary-sized native hen brings \$1 here, and half-grown chickens from 50 to 60 cents each. The fowls are all proportionately smaller than those of the United States. Eggs range in price from 25 cents a dozen in periods of great abundance to 60 and 65 cents. The native fowls are mongrels of a game type, the English and Spanish game predominating, and do not carry much flesh. The eggs are also smaller than the average eggs marketed in the United States. The game type of chickens is to be found in all parts of the island, due to the interest formerly taken in cock fighting. In times past the exportation of fighting cocks to neighboring islands and even to parts of South America was quite an item.

Poultry raising in a climate so equable as Porto Rico's would seem to be assured of success, but there are certain diseases and certain insect pests that render the undertaking somewhat hazardous for the inexperienced. Further, pens and runways must be rat-proof, and provision must be made for sheltering the young chickens during the rainy season to guard against disastrous losses from rats and storms. However, a few people in the island (chiefly Americans) have been fairly successful in a small way with blooded fowls.

No doubt, if breeders in the United States would lend assistance in the solution of the problems confronting the fancier in Porto Rico and would make a determined effort to interest the natives in a better grade of fowls, a market could be opened that would grow increasingly remunerative. If an educational campaign were to be conducted in San Juan, Mayaguez, and other places, it is believed the response would be satisfactory. So far as can be ascertained there is no dealer on the island making a specialty of handling fine poultry or supplies, yet this sort of a business conduction in connection with a store handling high-grade northern-grown seeds is believed to offer a good opening.

AUSTRALIA REGULATES BREAD.

Details of the regulations fixing the prices of flour and bread in all the capital cities of Australia are given in an article in the Melbourne Age. The price of flour was fixed at \$54.75 per ton, delivered within any of the proclaimed areas of any State of the Commonwealth other than Western Australia, and \$55.48 in Western Australia. The price of bread in any of the States other than in Western Australia is fixed at 6½d. (13.2 cents) for a 4-pound loaf sold over the counter, and the price in Western Australia is fixed at 7d. (14.2 cents). It is provided that where a fraction of 4 pounds is purchased the price shall be proportionate to these figures, and that where such a price includes a portion of a penny, other than a halfpenny, the amount may be increased to the nearest halfpenny.

HARMAN PLANS AMENDMENT.

He proposes to do this under the initiative law for adoption of amendments to the constitution. If he obtains enough petitioners his proposed amendment will be submitted together with the proposed prohibitory amendment. Whether either amendment will be aided or injured by being submitted at the same time is one of the questions Mr. Harman does not touch upon in a statement issued by him.

It was reported a month or two ago that such an amendment as Mr. Harman proposes was likely to be submitted. His proposed amendment calls for the "constitutionalizing" of the food, drug, dairy and oil commission which are now by statute under one head. The only change an amendment would make would be in placing the departments under an appointee instead of under the control of the governor through an appointee, and in extending the term of appointment to six years.

Principal Points Brought Out at Second Day's Session of Corn Syrup Hearing Held at Chicago, June 21-23

PROCEEDINGS at a hearing before the Illinois State Food Standard Commission, at the Officers of the Commission, 1627 Manhattan Building, June 22, 1916, at 10 o'clock a. m. Thomas P. Sullivan, Chairman.

Chairman Sullivan: Gentlemen, we will now come to order. The Commission in creating these hearings and that was arranging for the hearings decided that Dr. Haines would preside on the day of the scientific investigations, and that I would preside on Manufacturers' Day, being the representative of the Board. That is why I will preside today. Today is the Manufacturers' Day, and I understand it applies to those who make the product and those who use the product, the manufacture of food products. With that thought in mind, I will call on Dr. Wagner, who represents one of the manufacturers of corn syrup. Dr. Wagner.

Dr. Wagner: Gentlemen of the Commission—My remarks will be very brief, because I do not think that the question before us, so far as we are concerned, requires any great amplification. The evidence submitted yesterday by these eminent scientists I believe showed conclusively that so far as the consumer is concerned, so far as the nutritive value of the two products in question is concerned, cane sugar and corn syrup, they are of equal value. If anything, the evidence tended to show that in some respects corn syrup, even though only in a very minor degree, might be a preferable article of food to cane sugar. That being so, it seems but fair that no regulation should be issued which would give one product a monopoly over the other, which would practically exclude it from the manufacture of certain articles of food.

At the present time whenever glucose is used it has got to be stated on the label in such a manner as to practically serve as a warning to the consumer; practically the same as saying, "Beware! This contains glucose." Now I could have read to you yesterday a great deal more of these malicious articles that have appeared in the newspapers, some of them the very best in this country. I have a whole stack of them here for use of the Board, if the Board desire to read them.

That, I contend, is a serious discrimination against corn syrup, and I shall use an illustration to bring out that point as strongly as I can. If you take a product which consists of, say, fifty parts of fruit—say, strawberries in this case—and fifty parts of sugar, it doesn't matter whether this is commercial practice or not, for the purpose of the comparison it will suffice. Such a product is usually labeled strawberry jam and that is all there is to it. The moment the manufacturer adds to that or replaces ten parts of the sugar by ten parts of corn syrup, so that the composition will be fifty parts fruit, forty parts cane sugar, and ten parts corn syrup, and going on the supposition that he does that for the purpose of improving his products, for such claims have been made and will be made today, then that product, under the definitions of the proposed standards of this Commission, ceases to be a jam. That ceases to be a strawberry jam. All of a sudden it becomes a glucose jam.

Now, I would like to know what basis is there for any such label. Why is that product a glucose jam or preserve? The whole object of putting such products upon the market is to enable the consumer to obtain fruit in this form throughout the year. It is the fruit that the consumer wants. He doesn't buy the sugar, although, of course, he does expect it. He prefers, very likely in most cases, to have a sweetened product, but the degree of sweetness cannot be regulated and must not be regulated by law, because, after all, the consumer has got something to say about that, and he has a right to demand that a manufacturer be allowed to furnish him that product which is most suitable to his taste, provided the fruit in itself is wholesome.

Now then, there is no question here about a lack of wholesomeness if 10 per cent of corn syrup, or more for that matter, were added to the product. Then why withhold that product from the consumer except under a flag that spells warning and danger? The foremost country in the line of manufactured preserved fruits is England. That is where the jams come from, and England doesn't make any restrictions. England allows the consumer to obtain any product he desires,

and the manufacturer studies the wishes of the consumer and then puts out such a product, and as the analysis which I have at hand will show, all the leading brands, or let me say nearly all the leading brands (I may not be technically correct in stating all the leading brands) in England do contain glucose. I am speaking from experience. There is Hartley, one of the best known brands of preserved fruits. We used to sell Hartley large quantities of corn syrup, and one day he notified us that he wouldn't take any more, and he said: "Why should I be buying your corn syrup, when you won't allow me to sell your own corn syrup in your own country, because in my country I am allowed to sell my strawberry jam containing 15 and 20 per cent more of corn syrup than you are, without any restrictions, and I am allowed to use it in my very best products, but when I try to sell this product to the United States they bar it. They say: 'No, you can't sell that product over here, although you use the American product in your manufacture.'" You are not allowed to sell in this country unless you put a stigma on it, unless you hoist a flag spelling danger, "This product contains glucose."

This is an actual experience and is not a little story, but actual facts. The preserves sold in this country under the Hartley brand do not contain corn syrup, and those sold in England all contain corn syrup, and the general judgment, including that of Mr. Hartley, is that the English products containing the corn syrup are the better products. All we ask of you, gentlemen, is to reconsider these standards for the use of corn syrup. It is a wholesome, meritorious product that the consumer wants and likes, and contributes to the health of the consumer, as is shown by the enormous sales of mixed corn syrups, and in that case I would like to cite that it is about the best case of history repeating itself that I know.

When corn syrups were first put out the same cry went up that the consumer was going to be cheated out of the product he had been buying for years, sugar syrups. And what is the result? Today very little sugar syrup is sold, but corn syrup is sold and it is the better syrup, and that evidence yesterday showed it very plainly. Therefore, we ask, gentlemen, that the use of corn syrup in these compounded products, which, after all, are only arbitrary products and are not subject to any specific standard, that the use of corn syrup be placed on a parity with that of cane sugar. "What is sauce for the goose is sauce for the gander." That is my whole story. Thank you, gentlemen.

Chairman Sullivan: I would understand, Dr. Wagner, from your position, that if strawberry jam or a jam of any fruit is made up with sugar and corn syrup, you would so state on that label. You would say, this is strawberry, sugar and corn syrup. Isn't that right?

Dr. Wagner: My understanding was that if you have only sugar you say, this is strawberry jam.

Chairman Sullivan: You want to revise the regulation stating, "This is strawberry jam, composed of the fruit of strawberry, commercial sugar and corn syrup, or fruit and grain sugar of any nature"?

Dr. Wagner: Well, that is up to the province of the Commission.

Chairman Sullivan: I am trying to get your purpose.

Dr. Wagner: My purpose? It is this: that if fruit and cane sugar is a jam or makes a jam, it may be sold simply as a jam; then a product consisting of fruit and sugar and corn syrup, and a product consisting even of a fruit of any kind and corn syrup, I do not know that such a product exists, but if it should, that is also jam, because the jam, after all, is the fruit itself and not the preserving agent, and in that case it is just as well to say that the primary object of having the sugar there is to preserve the fruit, and the sweetness is the secondary consideration.

Chairman Sullivan: Then if you would declare the sugar you would also declare the corn syrup, and if you did not declare sugar you would not declare the corn syrup?

Dr. Wagner: Either both or none. I do not see the necessity of declaring them at all; one product is as wholesome as the other. The sale of this product takes care of itself, be-

cause you are dealing with a discriminating public. Take any of the brands that are sold. For instance, my friend Miller would assure you that the Richelieu brand is the very best brand, and the public know it, and very likely it is true—I do not know, but there may be others who say, "I do not like that Richelieu brand as well as I do this Smith brand because it is not so sweet. It has not got that sickish sweetness to it." Therefore, he gives the preference to the other products, so I do not see the necessity of any declaration so long as you are dealing with products that are equally wholesome and are used for the same purpose. I see no necessity for it at all.

Chairman Sullivan: One further question. You state that in England glucose is used, may be, used without labeling. Can you tell us what the custom is in the other countries of the world?

Dr. Wagner: I will speak of France, because I had a search made a few years ago, and had the leading high-class stores of New York city search for imported fruits of this character, and I remember in particular, one bottle of preserved strawberries from France, preserved in champagne. Now you can see from this that that was not a cheap article of food. As a matter of fact, that small jar cost \$1.85, and to make that product salable in this country there was a label on it: "Contains 15 per cent of glucose," and yet when the product is sold in France it is sold as preserved strawberries. Now, I shall be very glad to have this pot (I have it still in my possession) sent to you after my return home, because it is a very illustrative case. You might argue, it has been argued that glucose or corn syrup is used as a cheapener, a contention not always borne out by the facts. In fact, it is quite frequently the other way. But here is a product that sells at a very high price, so that the conclusion is forced upon you that that amount of glucose, that 15 per cent in there, is added for a very specific and meritorious purpose. I do not know what the purpose is—possibly it is to prevent the crystallization of the sugar. At any rate, it is added to a product that is so high in price that the cheapness of the corn syrup is of no moment when you consider that phase of it. And I say so long as—pardon me, I want to return to your specific question. That disposes of England and France. Germany isn't much of a preserved fruit country, as far as I know. You see very little over there and yet it is more of a home industry than in this country or England. I do not know just what the laws are on that subject. I shall be glad to look it up, though, and file that statement in a supplementary letter. I think there will be ways and means of finding out. I think we will be able to find out from the Department of Agriculture at Washington.

Mr. Miller: Dr. Wagner, is it not a fact that the valuable part of jam or jelly is the fruit instead of the sweetening?

Dr. Wagner: That is my point, exactly.

Mr. Miller: Now, to get the same degree of sweetness if glucose is used that you would if sugar were used, must you not use a larger amount of glucose than you did of sugar?

Dr. Wagner: That is not a practical question at all, because any man that uses corn syrup knows that the degree of sweetness will not and cannot be the same in it if he use cane sugar alone. There is no question involved in using a large amount of anything, because you can't go above the 100 per cent—that is the limit. The standards will also provide and should provide that there must be a minimum amount of fruit there, so, therefore, it is impossible to put a product upon the market made from a corn syrup that has got the same degree of sweetness as that made from cane sugar, and the claim of those manufacturers that favor the use of corn syrup is that it has the merit desired and is not so sweet as the strictly cane sugar product.

Mr. Newman: In other words, you answer that you don't intensify the sweetness by an amount of glucose. Is that it?

Dr. Wagner: We do not intensify the sweetness by adding glucose; we reduce the sweetness. I do not know what you mean by your word "intensify." I have heard some things said here about the very considerable use of corn syrup in preserves and products of this class, indicating, but that is not my own experience. I do not know anything on that subject indicating that the use of corn syrup accentuates the flavor of the fruit itself, because it is very plain, and I do not think it requires any comment on my part, that the excessively sweet taste of sugar naturally hides to a certain extent the delicate flavor of fruit. I think any housewife, nearly, will bear me out in that. Possibly Miss Cauble, I do not know. Have you had any experience, Miss Cauble, bearing out the point whether the flavor of, say, a strawberry preserve is improved if less sugar is used, and in place of the sugar corn syrup is used?

Miss Laura A. Cauble: In America it is our aim to teach the student the natural flavor of fruit and then to teach him the method of cooking by which that natural flavor shall be retained, and in cooking with corn syrup the natural flavor of the fruit is more delicately retained than in the use of sugar.

Dr. Wagner: That was my understanding. I would like to introduce Miss Cauble.

Chairman Sullivan: Will you kindly state your full name and address, and also your qualifications?

Miss Cauble: Laura A. Cauble, 628 W. 114th Street, New York City; scholar in Nutrition, Columbia University 1909 and 1910; John S. Kennedy, Fellowship in Social Science, Columbia University, 1912-13; head of the Department of Home Economics, Carnegie Institute of Technology, Pittsburgh, Pa., 1909-12; in charge of the Bureau of Food Supply of the Association for the Condition of the Poor, 1913-15. Made a special study of the food supply of England in the industrial cities during the summer of 1912. I am doing private research under the direction of Graham Lusk, Professor of Physiology, Cornell University Medical College.

Chairman Sullivan: Mr. Newman, do you want to ask any question of Dr. Wagner?

Mr. Newman: I understand, in reply to Mr. Miller, that you said you couldn't go over 100 per cent, and I thought you inferred that it was impossible then to reduce the sweetness of sugar by using any amount of glucose.

Mr. Wagner: And I think that is true.

Mr. Newman: That is just what I wanted to ask, that is what you meant? I understood Mr. Miller to mean that if you use enough glucose to get the sweetness of sugar inside like out—

Dr. Wagner: You would have a fruit syrup. Then it would cease being any fruit and be merely cane sugar and corn syrup.

Mr. Newman: It is not possible by any combination of a strictly glucose mixture to get the sweetness of sugar?

Dr. Wagner: I say emphatically, *no*.

Mr. Newman: How would you protect the purchasing public from a retailer who all the while is aiming to buy the cheapest articles that he can buy and then sell them before the higher priced articles? How are you going to protect the consumer and public?

Dr. Wagner: The object of the food law is first of all to protect the consumer, so far as the wholesomeness of the product is concerned. There is nothing standing in the way today, of a retailer selling a product that is made from ninety parts of glucose and ten parts of sugar, and palming it off on the public at a higher price than would be warranted by the contents.

Mr. Newman: Excepting the statement on the label.

Dr. Wagner: That won't protect the consumer.

Mr. Newman: If he wants to read he is aware what he is getting.

Mr. C. M. Newton: Mr. Commissioner, may I ask Dr. Wagner a question?

Chairman Sullivan: Certainly. Just give your name, please, for record.

Mr. Newton: C. E. M. Newton, representing James Middleby, Jr., Inc., Chicago, Illinois.

The first thing I want to get clear in my mind is whether or not an article is deserving of the name jam or jelly or a preserve if it is not made exclusively from fruit and sugar; whether it ceases in fact to be a jelly or a jam or a preserve, taking those words in their original meaning, or whether or not there may be other preserving substances and still entitle it to be called a jam. What is your opinion, Dr. Wagner?

Dr. Wagner: That is my opinion that there are other substances like corn syrup—

Mr. Newton: Are there any other substances?

Dr. Wagner: Well, yes. There might be honey, maple sugar, any number of substances. Alcohol even is a preserving substance.

Mr. Newton: Well, it may be a preserving substance, but I do not think—would the resulting product be a true jelly or a true jam or a true preserve?

Dr. Wagner: No, it would not.

Mr. Newton: Now what in your opinion if you wish to state it, would be the amount of fruit necessary to be present to entitle any substance whatever the preserving agent if it was a proper one, to be entitled to the name jam?

Dr. Wagner: My answer to that would be this: That the amount of fruit should be no less in a case when glucose or corn syrup is used, than in a case when only sugar is used, whatever that amount may be. I am not an expert in that. In either case it would be the same, of course.

Mr. Newton: Then you would draw the line not as to the preserving agent but as to the amount of fruit present in the resultant product?

Dr. Wagner: That is the main object.

Commissioner Matthews: What in your opinion in the minds of the people constitutes a jam or a jelly? You said—I will let you answer that question.

Dr. Wagner: I should say that it is the preserved fruit reduced in some manner or other to the consistency of a jelly or a pulp. I am not an expert on the manufacture of jellies and jams. I give you simply a layman's notion about it.

Commissioner Matthews: Do you think that is the idea of the people of a standard for a jam or jelly?

Dr. Wagner: No, I say that is my idea of it.

Commissioner Matthews: What, in your opinion, when a person unfamiliar with the subject of manufacture, calls for a jam or a jelly, does he expect to get?

Dr. Wagner: He expects to get a fruit preserved in some way, and having more or less sweet taste, and of course the principal part of that product being fruit, I should judge.

Commissioner Matthews: The testimony of Professor Carlson yesterday showed that the people had an idea of sweetening or sweetness, that influenced them in their action in selecting these products. Is it not a fact, or do you not believe that upon that idea of sweetness as a basis the standard in the mind of the person as to sweetness is based, with jams and jellies?

Dr. Wagner: Well, I think that is practically a criterion of it, and I think that is why you will find it so. I have observed it in my own family, for instance. I went into this quite extensively. I found that I could induce my children to eat much more fruit, which I would like to have them do, in the winter months, if the preserve or jelly or jam were less sweet. The sweetness stops the consumption of the wholesome fruit. That checks it and retards it.

Commissioner Matthews: Do you know anything of the methods, the ordinary careful methods of making jams and jellies?

Dr. Wagner: Oh, yes, to see a man make it, but I do not know that I could give an account of it.

Commissioner Matthews: You do not know what they use to make a jam?

Dr. Wagner: No, I do not know.

Commissioner Matthews: Or do you know what they use to make a jelly, you are wholly ignorant upon that subject?

Dr. Wagner: Not wholly ignorant.

Commissioner Matthews: Do they use sugar?

Dr. Wagner: I should say.

Commissioner Matthews: Did the families commonly use glucose in making jams and jellies?

Dr. Wagner: My mother did not, but I do know a good many families today where they use it. I will give you an illustration of that right here. Here is an article, please let me put it in, as it will help to answer your question. There is nothing more common than a newspaper in some respects. This is from the St. Louis Republic, June 16, 1916. This is an article written by Miss E. H., Perryville, Mo. It is addressed to the "Better Housekeeping Club."

"Berry, currant or gooseberry jam.

"To one pound of fruit use one-half pound sugar and one-fourth pound Crystal White Karo syrup. Wash fruit and mash (I am learning something about the making of these jams, after all). Place in layers with sugar and let stand long enough to extract some of the fruit juice. If dry, a little water may be added. Cook from one to ——— hours until thick. Test on a cold plate and stir frequently to prevent burning. Seal in crystallized glass jars."

"Spiced Grape preserves.

"Seven pounds fruit, 3 pounds sugar, 1 pound Crystal White Karo Syrup, 3 ounces cinnamon and cloves, etc."

That came to my attention only yesterday. That answers your question to a certain extent.

Commissioner Matthews: Dr. Wagner, when a person unfamiliar with the methods of manufacture asks for a jam or a jelly what, in your opinion, do they expect to get?

Dr. Wagner: Fruit preserved in some way or other, having more or less sweet taste.

Commissioner Matthews: Having more or less sweet taste. And they expect that sweetener as what?

Dr. Wagner: I do not know.

Commissioner Matthews: You do not know.

Dr. Wagner: Just a minute. I want to be frank with you. I am trying to put that question to myself. Take the case of England here. There are such large quantities of jams and marmalades sold there, as this record shows, and

practically all containing a liberal amount of corn syrup, and no declaration is made of the content upon the label. It seems to me that the consumer over there is satisfied to obtain the product itself. He has the assurance that the sale of any unwholesome product would be stopped, and therefore the consumer does not concern himself with the quality of, say, wheat flour.

Chairman Sullivan: I wish that those who are here today and who were not here yesterday, would sign this record as it is passed around.

Mr. W. F. Bode: Mr. Chairman—(interrupted).

Chairman Sullivan: Mr. Bode has got the floor next.

Mr. Newman: Are you going on with the manufacturers?

Mr. Miller: There is one thing that I want to say. Mr. Commissioner, and that is this: That we do not object to any standard or any ruling which will require a statement on the label, both as to sugar and as to glucose if it is used, including a statement of the percentages of glucose and sugar.

Chairman Sullivan: You refer now to your firm when you say "we"? As Sprague, Warner & Company, is that right?

Mr. Miller: Sure. We are perfectly willing, in other words, that a statement of ingredients as well as a percentage of ingredients shall be named on the label, but we don't want a standard fixed which will enable any one to come in and use glucose without making that statement.

Mr. Newton: May I ask Mr. Miller whether he advocates the use of percentages in the statements on labels, or whether he looks upon it merely in a permissive way?

Mr. Miller: I am an advocate—

Dr. Wagner: May I answer that? In being an advocate of the disclosure of the percentages of any food products on the label Mr. Miller is in conflict with the National Wholesalers' Association of the United States, whose statement to that effect was made before the Ways and Means Committee at Washington, as given by Mr. Lockwood of New York. The wholesale grocers of the country are opposed to a disclosure of what they consider their trade secrets.

Mr. Miller: Mr. Chairman, I was not speaking of trade secrets. I am speaking only of those cases in which the use of glucose is concerned.

Dr. Wagner: Then you limit it to glucose and sugar?

Mr. Miller: That is the question we are dealing with now. We are not dealing with any other question.

Mr. W. F. Bode: Mr. Chairman:

Commissioner Sullivan: Will you please give your name and your company, for the record?

Mr. Bode: William F. Bode, Vice-President, Reid, Murdoch & Company, wholesale grocers and manufacturers.

I wish to appear before this Commission in this hearing, and qualify as a manufacturer using the products that are under discussion here, as a maker of jams, jellies, preserves and so forth, syrups included.

I was not present at the hearing yesterday, of the experts who outlined the great merits of corn products or glucose (corn syrup), but I wish to indorse all they may have said with relation to the quality and the wholesomeness of that product. I am a firm believer in corn syrup, as to its meritorious worth and its great benefit to the human race. In fact, I think it has been a great addition as a discovery to be allowed to distribute it, and to be used by the people of the countries where it is sold, and under the rulings of state and government officials, this product has been condemned to a very marked degree by reason of the requirements under their rulings, stating that the product used in connection with some other product was to be marked "Mixed Adulterate Compound" or words to that effect. We earnestly trust that such imputations or such condemnation of this product will be withdrawn and removed. We are sincere in our belief that it should not be condemned, because we believe it is a good, wholesome product.

The question, however, that manufacturers are up against in connection with the distribution of their product, is to declare what they sell to the people, openly, honestly, and without any subterfuge or covering up. Corn syrup or glucose has been covered up all these years. It was covered up originally when it was mixed with syrup, and it paraded in that mixed condition as syrup. In other words, it tended to deceive the people. Now, why that deception was practiced is probably due to the fact that the discoverers of that product found something of merit and of value which could be manufactured at a lower price than syrup, and they wished to take advantage of the higher market value of sugar syrup. They mixed it and it was sold without qualifications, and the manufacturers secured the difference in price or difference in profit. The sugar syrup people brought a charge of adul-

teration, and from that time to this it has always been charged as being an adulterant, I say wrongfully, excepting that it has brought trouble upon the manufacturers of corn products or of glucose, by their own neglect to proclaim the great merits and wholesomeness of corn syrup or glucose. If they had come out frankly and openly and declared to the people of this country and other countries that glucose was an article of great merit, absolutely cleanly, it would have been consumed in larger quantities than sugar syrup. I think it would have made a name for itself, and probably it wouldn't have borne the criticism that it bears today.

Subsequently corn syrup or glucose became an ingredient of jams and preserves, for two reasons. When used in a certain quantity it does add to the character and quality of the preserve and jam, we do not believe that it adds to the jelly. I believe that it detracts as to character from jelly, but not a jam and preserve. I do sincerely believe that up to a small quantity it will tend to smooth out and polish up a jam or a preserve. It will tend to keep the jam and the preserve from crystallization, which the unscientific manufacturer or cooker of preserves is likely to overboil in cooking his preserve, and which would tend to crystallization, so in that respect a small amount of glucose or corn syrup is a benefit to preserves. But unfortunately some manufacturers, and I will call them the unscrupulous manufacturers, in a desire to gain profit and turn these products out as against sugar products, seek to load up their jams and preserves with the largest amount they will stand and turn them out, up to the time the food laws stepped in and made them qualify or state, turn them out against the sugar product.

Now, as regards Mr. Miller's declaration as to what do people believe they are buying when they ask for jam and preserves, I believe they consider they are buying something comprised of fruit and sugar. The fact that corn syrup, a new discovery, is added to it doesn't detract from the value of the preserve, in my judgment, but I do believe if it is used it should be so stated. The trend of the times is to educate the people, and I think what I say will be the experience of others, that if corn syrup is such a great benefit to preserves, jams or jellies as they declare, that it is time now to commence to educate the people of those great merits instead of trying to cover it up. We are not afraid of any product we turn out. There was a time when we thought it was necessary to be secret about many things. That time is past. The open public statements with regard to food products, with regard to anything in fact, is publicity or a knowledge of what you are buying, a knowledge of what you are selling, and we find it much easier today to go out and state particulars with regard to things, rather than have an air of mystery about it. That time is past. I might not want to tell them the formula for the making of a certain sauce that I make, but it must be wholesome.

Now, what is the position of the Food Departments and Federal authorities with relation to other products? Whenever they are used they must be stated on the label, and why? Because they want to give knowledge to the consumer of what she is buying or getting. Take the question which is directly in point, there is another product produced in this country that I think has as great or greater merit for the benefit of the human race as glucose, and that is cottonseed oil. It is an American product, and yet when that is used in anything it has got to be stated, and there is no objection to stating it. The Government goes so far as to say that it must be stated so that people will not believe they are getting olive oil, or that the dealer is giving them olive oil instead of cottonseed oil. The same rule applies to peanut oil or any other foreign oils. They must be qualified, they must be stated so that there will be distinguishing marks to enable the consumer to know what she is buying. That same proposition applies, too, when we make preserves, jams or jellies out of other wholesome fruit, as in the case of apple juice or apple product when we mix it with another product. Now some of the best preservers (and the mother at home wouldn't make a preserve out of one fruit without adding apple juice) declare that apple juice adds to the value of the product, but because apples are cheaper than other fruit, and to avoid allowing the manufacturer or dealer to take advantage of the consumer, the government and the state officials say you must put it on the label, and we believe they are right, and that knowledge and that fact has increased the sale to a very large extent. It is educating the people, and we believe in that. When people want apple products, let them have it. They can buy it cheaper, and it gives the consumer the assurance that the dealer can't foist an apple preserve on the consumer at the straight fruit price. They do buy it cheaper. The result is that by buying it cheaper it has increased the con-

sumption to an enormous degree, and it is a very wholesome product.

Now, there are features in the other lines, like in the canned food line. When we used dried lima beans or dried peas, we have got to state the fact that they have been soaked, that indication is on the label, and yet I believe that a soaked lima bean is just as good and just as wholesome as a fresh lima bean canned, but because of the fact that it is different than the fresh, because it is usual to pack goods in the cans fresh, the authorities want the person to know that gets that can, that it has been soaked, or is a dried bean or a dried pea.

There is the question in the packing house line, the question of butterine. Now I like butterine myself, if I am out under conditions hunting or fishing and butterine is offered to me, I would be most pleased to have it as against nothing. And it satisfies a large majority of people who want to invest a less amount of money for butter than for pure butter. I say it is a wholesome product, but to leave that product to be marketed as a butter, and it is a butter in fact, it is of butter character and consistency, without making it necessary to qualify it I think would be wrong.

Now with reference to the statement on the label, we manufacturers have no objection to stating all the facts on the label with reference to what we use or what is in the product. If it is believed best to state that this preserve or this jam is composed of sugar and fruit only, make the mention that it is manufactured and made from fruit and sugar, we have no objection to that whatever. I do not think there is any. The fact that it hasn't been insisted upon simply shows it was an accepted condition that fruit and sugar were the component parts of jams and preserves. Now a further serious situation develops, if the statement is not required on the label. Instead of using ten per cent or five per cent that makes in my judgment a very fine and satisfactory preserve, free from crystallization, there will be twenty, thirty, forty, or even fifty per cent of corn syrup used for the sole and only reason to take advantage of the consumer.

Chairman Sullivan: You believe in percentages then, in jams, jellies and preserves?

Mr. Bode: In the statement on the label?

Chairman Sullivan: Yes, instead of sugar and corn syrup.

Mr. Bode: No, I have no reason to insist on that. I would be perfectly contented to leave the quality up to the consumer to determine. But I do want them to state that that jam contains corn syrup.

Dr. Wagner: And the other ingredients?

Mr. Bode: And the other ingredients, absolutely. I have no objection to that.

Miss Cauble: How high a percentage of fruit and how low a percentage of sugar can you use in making a good jam?

Mr. Bode: The best jam in my judgment is made about forty-five per cent of fruit and fifty-five per cent of sugar.

Miss Cauble: Have you ever made a lower percentage of sugar answer the purpose by using a better quality of fruit and cooking it longer?

Mr. Bode: Do you mean using more fruit and less sugar?

Miss Cauble: Yes, using less sugar.

Mr. Bode: Well, yes. The more fruit you can use, and the least sugar, I will agree will make the best jam and preserve, but not a commercial jam and preserve.

Miss Cauble: How low is the lowest quantity of sugar you use in making any jam that is on the market today?

Mr. Bode: Oh, the lowest amount? Well, we have made a jam without any sugar and all glucose.

Miss Cauble: I don't want any sweetening in it but sugar.

Mr. Bode: Glucose is a sugar.

Miss Cauble: How low is the lowest percentage of sugar you have ever used?

Mr. Bode: None.

Miss Cauble: No sugar whatever. Did you brand that so the housewives knew it? If they knew it, they would buy it, because it is the organic acids they want and not the sugar.

Mr. Bode: You will find most of these whole fruit preserves, so-called, in water. They are cooked down a trifle and the bottles sterilized.

Miss Cauble: I am not talking of canned fruit, I am talking of jam.

Mr. Bode: I am talking of a class of fruit.

Miss Cauble: I am talking of jam not fruit.

Mr. Bode: You can't make a jam without some agency with the fruit, in my judgment.

Miss Cauble: You can't for commercial use?

Mr. Bode: No.

Miss Cauble: We have.

Mr. Bode: With no sugar?

Miss Cauble: No sugar.

Mr. Bode: We have used glucose, thinned it down very much, but the question resolves itself down now, and I am speaking only from a commercial standpoint, we manufacturers are up against the competition of the world.

Miss Cauble: Pardon me, my question was asked because your statement pointed towards your desire to please the consumer. Now the consumer is anxious to get the highest percentage possible of fruit, consistent with the good quality of jam, jam to a housekeeper meaning a well-cooked quantity of fruit which retains the fruit flavor and serves as a spread to bread. That is about what jam means to a housekeeper.

Mr. Bode: You have a jam made with apple juice and with strawberries?

Miss Cauble: Yes, and with peaches.

Mr. Bode: A jam made with apples and peaches makes in my judgment the best and smoothest jam with not too much sugar, for the children and the family to eat. That is evidenced by the great sale of the apple and fruit jam of today.

Miss Cauble: The cost of handling the fruit exceeds the cost of the sugar?

Mr. Bode: No doubt, but apple juice does not.

Miss Cauble: No.

Mr. Bode: On the contrary, it tends to cheapen or lower the cost of the article, and in that way allows the consumer, the great masses, to buy that fruit and to have plenty of it.

Miss Cauble: I was speaking from the consumers' standpoint.

Mr. Bode: I do not want to take up too much time with this Commission, but I just want to give a few facts now, with reference to jellies, if you want to listen to a manufacturer's viewpoint in the use of glucose. The best jelly is made without glucose. The fine, tender, nice fruit jelly is made with simply sugar and fruit. That is conceded by any one who knows anything about the jelly problem at all. The so-called glucose jelly is a jelly of commerce that seems to satisfy a great many people. It is sold chiefly in the mean sections of the country and among farmers, but the fine fruit jellies cannot be made with glucose. I am talking now as an expert from that standpoint only. There may be others that have had a different experience.

Dr. Wagner: Jelly can be made with glucose.

Mr. Bode: Dr. Wagner has made the statement that the fact that corn syrup is mentioned on the label is a warning spelling danger. I do not believe any such statement. Therefore I reiterate what I said before, that it is time now to commence to educate the people—

Dr. Wagner: I will answer that.

Mr. Bode: Therefore as a distributor of food products we would recommend the statement of the ingredients, and recommend the statement of corn syrup to greatly increase its consumption and use.

Dr. Haines: You have answered some of them I think. Did you not state that the proportion of corn syrup that would improve an article was five or ten per cent?

Mr. Bode: About five or ten per cent. In other words, just sufficient to overcome poor workmanship in the factory.

Dr. Haines: And five or ten per cent would improve the quality?

Mr. Bode: Well, I won't say the quality. It improves the character.

Dr. Haines: The second point I would like to ask you about is, does your firm use corn syrup in making some of your products?

Mr. Bode: Oh, yes.

Dr. Haines: And how do you label it?

Mr. Bode: We state on the label whenever it is used.

Dr. Haines: What do you state on the label?

Mr. Bode: We state, this jam comprises fruit, sugar and glucose, or fruit, glucose and sugar, or corn syrup. We are now using the words corn syrup, and we strongly advocate the elimination of the word glucose and adopt the word corn syrup.

Dr. Haines: That is the point I wanted to bring out.

Mr. Bode: Oh, yes. We favor that very strongly. Glucose has been traveling under false colors all these years. It has been traveling under the charge of being an adulterant. Corn syrup eliminates or softens that, and some people say that glucose is made from glue. We want to eliminate those kind of charges. I am a great advocate as to the merits of corn syrup and glucose, and I do not appear before this Commission to run it down in any sense, but I do want the people to have knowledge that when I sell it they are getting it, and I want to eliminate the unscrupulous competitor or manufacturer from taking advantage of me if I am selling preserves made from fruit and sugar.

Dr. Wagner: I would like to ask, don't you think the juice of the fruit inverts the sugar, even though glucose is present?

Mr. Bode: I know that glucose will take all the granulation out of molasses, and although the juice of fruit will have a tendency in the same way, any acidity will have a much greater tendency.

Dr. Wagner: And it will take much less fruit to bring about an inversion of the sugar than of the glucose. So that it is no characteristic of glucose, but it is common to a good many other articles like fruit, so the fruit degrades, according to your statement, the sugar.

Mr. Bode: Let me put it in another shape. Take a barrel of molasses, which has millions and millions of fine particles of sugar floating around in it.

Dr. Wagner: Nevertheless, the fruit has got the same property, too. But I do not want to take much of your time. I just want to respond to a few remarks of Mr. Bode. I think he has given us a very interesting talk, full of interesting information, but there are some things that I want to touch upon briefly. He says it is about time that the corn products people should get busy and preach the gospel of corn syrup. I have been connected with this industry seventeen years and that campaign has been carried on extensively since I have been connected with the business, and the expense of that campaign of educating the public of this country has run into millions and millions of dollars.

Mr. Bode: May I interrupt you? We want to take that expense on ourselves—by printing it on the labels.

Dr. Wagner: That might help us.

Mr. Bode: I am doing your advertising for you.

Dr. Wagner: The Corn Products Refining Company is sending out, to my own knowledge, every year, hundreds of thousands of cook books, trying to teach the domestic schools as well as the public at large, to use corn syrup in the preserving of fruit and fruit products, and gives them the formula. The Manufacturers' Association sends out sets of samples, costly sets of samples, to every teacher no matter whether it is the lowest teacher in any school, or whether it is a pupil even, every one applying for literature or samples of corn products will get a complete set, and I think I am safe in saying that the Association within three years has sent out at least one hundred and fifty thousand if not two hundred thousand individual pamphlets, at a cost of \$25,000.00.

Mr. Kersting: It was 500,000 pamphlets.

Mr. Wagner: Now, then, I think no one need say to us or admonish us to start out on a campaign for the truth, and any insinuation that we are trying to cover up the use of corn syrup is not well founded.

Mr. Bode: That is your whole proposition.

Mr. Wagner: It was nothing of the kind. Nothing is further from our minds. These gentlemen maintain practically that jam is a product that is made only from fruit and sugar. The Government—

Mr. Bode: I didn't make a statement like that, "made only of fruit and sugar."

Dr. Wagner: Yes

Mr. Bode: It was known originally as being made only of fruit and sugar.

Chairman Sullivan: I was trying to get this right. You represent the Corn Products Refining Company, Dr. Wagner?

Dr. Wagner: I represent the Association, and the president of our Association is present in the person of Mr. Kersting, of Clinton, Iowa, who would like to make a few remarks.

Chairman Sullivan: Mr. Kersting, will you please come forward, so we can all hear you speak?

Kindly give your name and address for the record.

Mr. A. H. Kersting: My name is A. H. Kersting. I am the vice-president and general manager of the Clinton Sugar Refining Company, of Clinton, Iowa, and the president of the American Manufacturers' Association of Products from Corn. Now, gentlemen, I am simply a plain manufacturer of corn products. I am not a scientist, I am not a chemist. I do not claim to be even an engineer. I know how to construct plants of this character, I am familiar with the manufacture of goods, I know how to make them and do make them. I rely upon guidance in the manufacture of pure and wholesome products of food. I rely for guidance upon the scientists in our employ, usually chemists. As you may know, we all have rather extensive laboratories. Those laboratories are maintained in as high a state of efficiency as we are capable of maintaining them, and we try to employ the best talent in our particular line, the most efficient talent that we can procure. We do not try to get them cheap.

Proceedings at a hearing before the Illinois State Food Standard Commission at the offices of the Commission, 1627

Manhattan Bldg., June 22, 1916, at 2:00 p. m. Mr. Thomas P. Sullivan, Chairman.

Chairman Sullivan: Gentlemen, please come to order. The Commission is trying to determine a concrete proposition to discuss this afternoon and at the same time get down to a basis of work here. I feel that we have spent all our morning here, and we are just as far now as we were then from getting down to something that we can discuss as a concrete proposition of what we are trying to determine, and Mr. Newman seems to have something in mind that might relieve the situation somewhat. State your thoughts, Mr. Newman, please.

Mr. Newman: Mr. Chairman: I do not believe there is any real difference of fact between the various manufacturers and distributors who are assembled here, when we get down to the real, final, concrete definition of what any of them would ultimately stand for.

Now, I think you will all concede the principle that food articles should be sold for what they are; then when we all stand on that basis, it is only a question of detail as to how we arrive at a method by which that thing will be brought about. As I understand the position today, the law of Illinois does not state in specific detail in any sense that strawberries and sugar are a preserve. The law states in substance that things must be sold for what they are. Then the interpretation that is to be placed upon the law is vested in you, gentlemen, so far as establishing what the language of the statute and the language of custom is, in the making up of food products. It is for you, gentlemen, to make that determination. You have in a tentative way made a determination that fruit and sugar (sucrose) with some other details are to be known without further labeling as a strawberry preserve, we will say, if that be the fruit that is present.

Mr. J. C. Puetz (Sprague, Warner & Co., Chicago): Mr. Chairman, I just want to ask Mr. Newman a question. You made the statement, if any or all is stated.

Mr. Newman: I mean to say that an article may be called a strawberry preserve, and that there should follow when it is called a strawberry preserve, the name of the fruit and the name or names of the preserving agent.

Mr. Puetz: You didn't mean to leave the idea that it was optional with the manufacturer not to say it, if he so elected?

Mr. Newman: No, sir.

Mr. Newton: Why not say all the ingredients?

Mr. Newman: I mean all the ingredients. I meant that.

Chairman Sullivan: Now, gentlemen, I believe we have a concrete proposition, and I am going to call on Mr. Puetz for your views on the matter as submitted now by Mr. Newman.

Mr. Puetz: Mr. Chairman and Gentlemen of the Commission: I would like the privilege—pardon me. I am connected with Sprague, Warner & Company. I am in charge of the manufacturing department of that business, and have been for fifteen years in which department the substances are used and produced and sold, that are under discussion.

Chairman Sullivan: Along the lines suggested by Mr. Newton and discussed by Mr. Puetz, we would like to hear from some more manufacturers who use in their food products corn syrup and glucose.

Mr. Gohl: Not if it is a pure, good, pound-for-pound sugar and fruit product, but I believe any other ingredients should be stated in the percentage.

Miss Cauble: And all of the fruit.

Chairman Sullivan: What is your conception of pure goods in a jam, on the label? Would you say strawberry preserves, or without the use of the word sugar at all?

Mr. Gohl: Yes, strawberry preserves, not use the word sugar at all.

Mr. Bode: Mr. Chairman: My reason for stating this morning, with reference to when cane syrup is used, that it should not be discriminated against, was based upon the fact that a new discovery has been made, and if other new discoveries come to our attention and notice, we shouldn't discriminate against those new discoveries.

Mr. Newton: Mr. Chairman, I would like to bring a few facts to your attention. The fact that you put an article into a glass jar doesn't necessarily change it as a food product, nor does it take it out of the pure class or put it into the pure class. Fruits are put up in varying degrees of sweetness. For instance, it is possible to buy a raspberry in water or its own juice, in a ten, fifteen, twenty or fifty-degree syrup. You are applying the word pure to something that you manufacture and call a jam or a jelly or a preserve. It seems to me you are laying too much emphasis upon the word pure, because we all do sell corn syrup, and so I do not see where you are going to get very far. Isn't it your individual idea more than it is the general manufacturing conditions? I can't see where

the word pure has anything to do with the question, has any bearing on the question at all, because if glucose wasn't pure, or corn syrup, neutral corn syrup, we wouldn't be wanting to use it at all. Nobody would. So it has no significance in my judgment, at all.

Chairman Sullivan: Mr. Williams, you were called for a while ago, I believe. Will you speak now?

Mr. Williams: My name is George P. Williams. Address, 3401 Carnes Boulevard, Kansas City, Missouri. My business, Secretary-Treasurer and General Manager of the Bliss Syrup Refining Company of Kansas City, Missouri.

My presence here, gentlemen, was actuated by what appeared to me to be the beginning of a movement which would bring to glucose a certain amount of recognition which it has not had in the past. In other words, taking it out of that bondage, that unjust bondage that it has been in for many years.

I have been a tester of glucose products daily for twenty-four years. I have regarded the quality of our products as a paramount feature in the upbuilding of our business in the various institutions that I have been connected with, and with regard to the wholesomeness of the product and for the benefit of the Commission, I wish to say that you have before you a living example of glucose many times a day for twenty-four years. During that period of testing, after about five or six years I was not only testing, tasting and swallowing cane syrup products, but preserves, honey and molasses, and I found an indication towards sour stomach. I didn't know on which product to place the responsibility. I thought at first that I would eliminate the honey. I would taste, but I wouldn't swallow the honey. It didn't stop it. I tasted the maple and the cane sugar syrups, and I decided to not swallow them. Finally, I got it down to the glucose products, and I found that that sour stomach ceased, and it has continued that way ever since. (Laughter.)

I am particularly interested in justice for glucose, primarily for this reason: our business is an independent plant, but we are making a special effort on high-grade preserves. I have gathered samples from some of the best manufacturers in this country and in Europe, and I have found that in my study of the palatability of these products, which I have given a great deal of attention, that the English preserver has it "all over," slangily speaking. The best English products contain, that is in preserves especially, in the berries, and by the way that is graduated according to the acidity and the flavor of the berry, anywhere from ten to twenty-five per cent of glucose.

Dr. Cutler: Mr. Chairman, may I say a word with reference to English preparations? A few years ago a gentleman was arrested for using corn syrup or glucose in England, up to fifteen per cent, in his jams, arrested by the authorities. The matter was taken up to the highest court. In the decision which was rendered, the Lord Chief Justice who wrote his decision held—and I have the full opinion in my office—that up to fifteen per cent, I think was the amount—of glucose was allowable in any jam or marmalade or preserve in England, for the reason that the evidence shows that it was actually an improvement, and therefore was a constituent part of the jam or preserve. Now, then, it becomes a law in England, it is the ruling of the judiciary of the court, the highest court, that a certain amount of corn syrup or glucose may be used in these food products for the reason that it makes them better. In other words, I take it that the court in England doesn't propose that the manufacturers shall mark time. They propose that the manufacturers shall have every possible opportunity of improving their product, to the extent that it is wholesome.

Now, Mr. Bode has very intelligently placed before us the information that this is useful under certain conditions, and the only difference between his position and that of the Lord Chief Justice of England in his decision, the only difference is that Mr. Bode is a little bit afraid of a possible competition, a little bit afraid that somebody will permit or will use a little bit more than they ought to use, and to that extent injure competition.

Mr. Kersting: I do not see what the question of price has to do with it.

Chairman Sullivan: I believe if we do not confine ourselves to this thought—it is simply a thought of my own, to confine the discussion to subjects that we will get somewhere with, that all ingredients of fruit, jams or preserves be so stated on the label, also percentages of the sweetening agents. Is that clear?

Dr. Wagner: Mr. Chairman: I would like to make a suggestion in that connection, the name of the product being the same in all instances. The present tentative standards for

products made with corn syrup say that that must be labeled glucose jams, and so forth. Now, if I understand you right, your proposition is that a product consisting, say, of strawberries and sugar, shall be labeled as a strawberry jam, giving the ingredients, fruit and the sugar, and their percentages.

Chairman Sullivan: Correct.

Dr. Wagner: And if the product consists of fruit and cane sugar and corn syrup, then the name of the product shall be strawberry jam, and the names and the ingredients of each of these three should be given specifically.

Chairman Sullivan: In the percentages.

Dr. Wagner: The name is the same.

Chairman Sullivan: Now, gentlemen, this is simply a thought of mine. This is just to get something before the house here, that we can get somewheres with. It indicates no decision of anybody. It is just a thought of mine in order to confine this discussion to some tangible thing and get somewhere.

Dr. Wagner: I believe, if I understood it correctly, that the percentage requirements apply only in your case to sweetening agents and not to the fruit?

Chairman Sullivan: We have been trying to help the boys who live out of town along here today. The last one was Mr. Moore, a very entertaining and energetic speaker. We have some more of those lively, out-of-town boys, and I would like to hear from some of them.

Chairman Sullivan: Is Mr. Battien here, of W. M. Hoyt & Company?

(No answer.)

Mr. Newton: Mr. Victor Steele is here.

Chairman Sullivan: I am trying to get the jobbers who are here. Mr. Steele?

Mr. Steele: I say what Mr. Corbin said; the contents should be stated on the label containing glucose.

Mr. Moore: How about the sugar?

Mr. Steele: Fruit, corn syrup or sugar syrup, whatever it contains. You have it on your syrup, you have ninety per cent and ten per cent cane sugar, don't you? It says that right on the label.

Chairman Sullivan: Would you believe then, that on a high-class jam or preserve you would have to say, fifty per cent of sugar and fifty per cent of fruit, and forty per cent of cane sugar and ten per cent of corn syrup on the label? Is that the idea? On your best goods?

Mr. Steele: On the best goods, having pure preserves. That is all.

Chairman Sullivan: What do you mean by "pure" preserves?

Mr. Steele: Sugar and the fruit.

Chairman: You would consider, then, the use of anything else an adulterant, and that it wouldn't be pure any more?

Mr. Steele: If you put in corn syrup, put on the label that it contains corn syrup.

Chairman Sullivan: Then it has ceased to be pure?

Mr. Steele: No, I do not say that.

Chairman Sullivan: Those are your views, are they, Mr. Steele?

Mr. Steele: Yes.

Chairman Sullivan: Is Mr. Rassman here? Mr. Rassman.

Mr. W. B. Rassman (Sheppard Strassheim Company, Chicago): Mr. Chairman: I haven't anything to say on the subject, but I would say the same as Mr. Steele has just said. I believe the amount of the different items put in the jar should be specified. A pure preserve I consider would be fifty-fifty, fifty per cent sugar and fifty per cent fruit, or otherwise, if they want to use corn syrups, put in ten per cent of corn syrup, but specify it on the can or on the jar, whatever it is, would be my idea.

Mr. Moore: I would like to ask the Commission if a ruling has been made determining what is pure?

Chairman Sullivan: Not that I know of. Is Mr. Oelerich of Oelerich & Berry Company, is the gentleman here?

A. No.

Chairman Sullivan: Is Mr. E. C. Howell, of Atmore & Son, present? Mr. Howell.

Mr. Howell: E. C. Howell, Atmore & Son, Philadelphia, Penna.

Mr. Chairman: I represent Atmore & Son, in Philadelphia, but we do not manufacture jellies or jams. We manufacture mincemeat, and I do not think that would enter here. We do not use corn syrup in our product.

Chairman Sullivan: Is anybody else here, gentlemen, who wishes to take part in this discussion today? I have done the best I can to get everybody's views, and we are very desirous of arriving at conclusions.

Is Mr. Horner's representative here? (No answer.)

Chairman Sullivan: Anybody else here, gentlemen, that wishes to make a statement?

Mr. C. R. Zimmerman (Armour & Company): Mr. Chairman: In regards to stating the percentage on the label, I do not believe that you can state by a hard and fast rule just exactly what the percentage should be. There should be a little leverage, a minimum and maximum on stating the percentage, because there is a natural food enters into the forming, the same as in spices. Take, for instance, the item of strawberry preserves, the only item that is not controlled by chemical determination is the strawberries themselves, which may vary in moisture and acidity and sugars, due to the condition of the soil or climate in which they grow, but the glucose and the sugar are controlled by chemistry, and the percentage of moisture is nearly the same, or can be.

Therefore, it seems to me that the percentage could be stated on the label, with the understanding that in the percentage stated on the label there could be a possible variance due to the nature of the various strawberries themselves. However, we are packers of great quantities of strawberries. I believe we pack more than anybody in the world. We have in Maryland. We examined every carload coming into Chicago, and we find there is not more than two per cent variation in the sugar content, and we make it a rule that every lot we pack is so supervised that we do know the percentage of sugar or fruit. We are not users of glucose in any of our products, but if we were, we could control our products and know the quantity of sugar or glucose they contained. We employ men of sufficient education so that they can get that information. We know just exactly what goes in and what comes out, and I believe that in the packing of our products there is not a variation of over two and one-half per cent of sugar.

Chairman Sullivan: Then, Mr. Zimmerman, considering the variations, you subscribe to the idea of percentages?

Mr. Zimmerman: Yes, sir.

Chairman Sullivan: Then you believe in percentages?

Mr. Zimmerman: Yes, I wish to answer Mr. Moore's question about percentages. He says that if the percentage was not stated on the label, the customer would have a chance by tasting a great many different brands, to find out just exactly which she would wish. If the percentage were stated on the label, is it not so that taking from five per cent to ninety per cent of glucose, there would be, say, eighteen different kinds of preserves possible; and if it was stated on the label, the consumer could taste the first one which contained five per cent and knowing it contained five per cent he would arrive at some definite idea of the taste. Then if he tasted the one containing sixty per cent, and if he liked that better, he would know in which direction to go to suit his palate, but if he did not know he would have to taste all eighteen of them.

Mr. Moore: If all of the ingredients are mentioned, I think it is fair.

Mr. Zimmerman: I think it is perfectly fair, but there must be some method of determining the variance or amount contained,—a minimum and a maximum.

Mr. Moore: How much of a variance would that be, according to your chemist's calculations?

Mr. Zimmerman: If any one reads they can get the variations of strawberries. It would be very slight. Of course, in the rainy season as it was this year, the moisture was very great. Our experts know the moisture content of those strawberries and they use the quantity accordingly. Notwithstanding this fact, the variation of strawberries is very slight, so far as the moisture and sugar are concerned.

Mr. Bode: Speaking from a practical standpoint, and when I speak that way I want to bring to your attention the conditions that confront an analyst in connection with the examination of fruits, jams and jellies. I mean preserves, jams or jellies, principally preserves or jellies.

I am not opposed to percentages from the standpoint of giving the consumer information, nor do I want to subject the manufacturer or the producer to a charge of having misstated or misrepresented the contents of the package. I maintain now, that it is absolutely impossible and impracticable to state the percentage of fruit, sugar, and corn syrup that may go into any one individual package. I say that without fear of contradiction, if the results are analyzed and looked into.

Mr. Puetz: I want to answer Mr. Bode by saying that we have no difficulty in arriving at the percentages in our products, whenever we want to give them and are called upon to give them to meet any food law requirements.

Commissioner Matthews: I fully agree with Mr. Puetz in that.

Interior Quality of Market Eggs—Eggs of Complex Structure—Study of Nature of Different Parts Leads to Understanding of How to Handle Eggs in Order to Keep Them in Best Possible Condition

By EARL W. BENJAMIN

(Continued from previous issue.)

FERTILE egg after five hours of incubation.—Even after five hours of incubation the candler can ascertain that the egg has been incubated. He can detect a tiny embryo on the upper surface of the yolk, and the yolk floats higher in the albumen than in a fresh egg. When the egg is broken open it will be noted that the yolk appears a little darker and that an indefinite ring is beginning to form around the germinal disk. The appearance of this ring varies in different eggs, but its presence denotes a developing embryo. The albumen is becoming darker and more watery and the vitelline membrane is weakening, allowing the yolk to flatten. This egg is suitable for food purposes.

Fertile egg after twelve hours of incubation.—After twelve hours of incubation, the embryo is clearly discernible through the shell. It usually appears at the upper edge of the yolk and is distinguished as a part of the yolk having a deeper red color. These early stages of development are very difficult to note with brown-shelled eggs. The yolk usually floats higher in the albumen than before. When the egg is opened, two or three rings around the germinal disk are clearly distinguishable. The yolk has more of a heated appearance; that is, it is darker in color and is still more flattened. The albumen has more color and is more watery. The chalazæ begin to merge with the middle layer of albumen. Eggs at this stage of development are still good for cooking purposes, and are better than the average eggs received direct from many farms during hot weather.

After noting the changes taking place in these two classes of incubated eggs, one can realize how serious it is to allow broody hens to remain on the nests even for one day. If many hens lay eggs in the same nest, it is easy to estimate the length of time the first egg laid has been heated during the day. This time often totals two to eight hours. The contents of these eggs break down quickly after removal from the nest, and they rapidly become unfit for food.

Fertile egg after five days of incubation.—The blood vessels can now be seen by the candler and the upper part of the egg begins to appear clouded. The vigor of the embryo may be judged approximately by its appearance through the shell. The air cell is increasing slightly in size, although this varies greatly with the humidity of the air. On opening the egg, the developing embryo and the network of blood vessels are seen on the surface of the yolk. The vitelline membrane is usually ruptured and the yolk contents flow out into the very watery albumen, giving the whole a light yellow color. The egg is absolutely unfit for food consumption and can be used only as meat food for stock or for other commercial purposes.

Fertile egg after twelve days of incubation.—After twelve days of incubation, the contents of the egg appear materially darker to the candler than at the five-days period. The blood vessels and the embryo are indistinct. The few blood vessels appearing near the air cell are much enlarged and are filled with blood. The whole egg is clouded, and the air cell is usually considerably enlarged. The opened egg dis-

plays the form of the head, the heart, and some other parts of the chick. Of course these eggs cannot be used for human food.

Fertile egg after eighteen days of incubation.—By the eighteenth day of incubation the chick must be very nearly developed if it is to leave the shell on the twenty-first day. To the candler the whole egg appears darkly clouded, and only the dim outlines of the chick may be discerned just beneath the air cell. The air cell is greatly enlarged, and the lower boundary is very irregular. The motions of the chick may be seen. The opened egg discloses the well-developed chick, with the embryo sac attached. Specimens of eggs of this kind are brought to the markets, and, needless to say, they are useless except as fertilizer, or perhaps as animal food if used when absolutely fresh. Deterioration begins immediately after the death of the chick, and of course this has affected the condition of the egg by the time it reaches the market.

Dead germ after five days of incubation.—If for any reason the embryo dies during the period of its growth, the common term "dead germ" designates the grade of egg produced. The dead germ shown here died after nearly five days of incubation. The characteristic feature of the dead germ is the blood ring, which is formed by the settling of the blood in the outer boundary of the network of blood vessels. The blood ring may be small and regular, or large and very irregular and even incomplete. The dead embryo itself appears as a small dark spot, usually stuck to the shell or partially attached to the disintegrated tissues. The air cell is usually somewhat enlarged. When the egg is opened the blood ring may show distinctly if it is small; or, if larger, it may appear as an irregular or broken band of blood. The embryo itself usually appears as a small dark lump, until deterioration has proceeded sufficiently to obliterate it entirely. The yolk and the albumen are mixed at this stage, and the egg contents are very watery. An egg of this type is of no use for human consumption, and after it has been held for a while decomposition rapidly sets in and the egg can be used only for a few commercial purposes.

In the very early and the very late stages of development the dead embryos cannot be detected by the presence of the blood ring. Of course, if the candler detects a spot on the yolk denoting a developing embryo, unless the temperature is approximately 100° to 105° F., he may know that the germ is dead. Dead chicks in the shell can be easily detected by candling. Ordinarily, incubated eggs are considered suitable for food purposes until blood vessels begin to appear or deterioration begins, unless some other factors, such as odor, flavor, and the like, limit their use.

Infertile egg after five days of incubation.—If eggs are infertile, the greater part of the difficulty in properly handling them is avoided. Incubation heat affects an infertile egg only slightly. The yolk is slightly darkened by the heat, and as a rule at this stage it does not float so high in the albumen as before. The air cell is enlarged, and its inner boundary is usually dark red. The whole egg dis-

plays the characteristic appearance of a heated egg—the orange-red tint. There is a definite boundary between the yolk and the albumen, rather than the gradual shading noted in the fresh egg. The opened infertile egg is distinguished by a very watery albumen which is slightly colored, and by a weak vitelline membrane which allows the yolk to flatten. The vitelline membrane often appears wrinkled and breaks very easily. The chalazæ are often hardly visible, due to their merging with the middle layer of albumen. The color of the yolk is dark, denoting heating. The odor of the opened egg is sometimes unpleasant, although it is usually impossible to detect any change.

Very often candlers, especially those of little experience or those using a poor light, mistake eggs having very small embryos for infertile eggs. If the eggs are to be used for cooking purposes, the candler must be very careful and should use at least a twenty-candle-power light. Infertile eggs are suitable for food uses unless they have been held so long that deterioration has started; in that case they are of value only for commercial purposes. Infertile eggs should be handled carefully and used for purposes for which mere freshness is not important so long as the eggs are good. They are satisfactory for nearly all cooking purposes, and are not usually unsatisfactory for frying or scrambling, even after having been removed from the incubator two or three weeks previously, if kept under proper conditions.

It is interesting to compare the infertile incubated egg with the series of fertile incubated eggs. One can thus realize the danger due to fertilization in market eggs. If a fertile egg is to be marketed in good condition, no cost should be spared in adopting every possible precaution. Infertile eggs do not require such extreme care.

The effect of low heat on eggs varies with the fertility or the infertility of the eggs. The indifference here is not so marked as at incubation temperatures, but in all phases of egg marketing any detrimental heating seems to have a much more serious effect on the interior quality of a fertile egg than on that of an infertile egg. For instance, a small degree of heating will usually cause a fresh egg to become a "light float." This will occur whether the egg is fertile or infertile, but the fertile egg will reach this stage and pass it much more rapidly than the infertile one. In studying the effect of heat on market grades of eggs, it is necessary also to consider the effect of evaporation, which has already been explained.

"Light float" and "heavy float" are trade names that are applied to eggs of a distinctly lower grade than fresh eggs. For consideration in this bulletin, all the inferior grades of edible eggs resulting from slow heating and evaporation are classed as light floats or heavy floats. The term was probably first adopted by market men as indicative of the buoyancy of the yolk in the albumen. In the light float the yolk is not quite so buoyant as in the fresh egg, but is more so than in the heavy float. Light floats and heavy floats are the commonest grades of market eggs received from the general farms, where in fact, most of the eggs are produced. The methods that the average farmer now follows do not allow the holding of eggs for a week and still having them stand the test for fresh eggs. Most of the markets make much finer distinctions than these three grades—fresh, light float and heavy float—but these are the main subdivisions, and further classifications may be made at will. By thoroughly understanding these three grades, one can easily adapt himself to any other system that he may wish to follow.

Light float.—The light float, as it appears to the candler, shows an enlarged air cell and a darkened yolk. The yolk has a more definite boundary than in the fresh egg and sinks lower in the albumen. The whole egg has a darkened and heated appearance. No embryo spot is visible on the yolk; if there were such a spot, the egg would have to be classed as a dead germ. Light floats are very difficult to distinguish from infertile incubated eggs. The air cell in the light float is in most cases larger, due to the drier air in which it has usually been held; but otherwise the appearances are nearly identical and the two grades are usually classed together. Light floats do not deteriorate so rapidly as do infertile

incubated eggs, and consequently they are usually sold separately. When the light float is opened, it usually appears in much better condition than the infertile incubated egg, as may be seen by comparing the appearance of the two eggs. The yolk of the light float is slightly flattened and is a trifle darker than that of the infertile incubated egg. The albumen of the light float is becoming somewhat watery and slightly colored, but is much better than that of the infertile incubated egg. The light float is just beginning to show the effect of slight heating, and, while it is still in good condition, it deteriorates rather rapidly after it has reached this first stage. The flavor is but slightly affected and can hardly be distinguished from that of a fresh egg. Light floats are good for practically all food purposes if used at once, but they should not be kept for a long period, even under proper conditions.

Heavy float.—The heavy float is a more advanced stage of the changes seen in the light float. The air cell is somewhat larger, and the yolk is much darker and usually lower in the albumen. The position of the yolk varies considerably, but the typical position is in the lower part of the egg. The inner membrane around the air cell is often loose and sometimes broken, allowing the contents to shake. To the candler the whole egg appears heated. When the egg is opened, the yolk of the heavy float is usually much darker than that of the light float, and is very often somewhat mottled owing to the localization of the heat effect. The vitelline membrane is very weak, and often breaks when the egg is being opened. The yolk contents sometimes begin to seep through the membrane, either flowing through a very small opening and extending needle-like into the albumen, or mixing with the albumen and forming an indefinite colored area around a large part of the yolk. The albumen is very watery and slightly colored. This grade of eggs includes those which have been heated and which are too poor to be light floats and yet are good enough for human consumption. It is about the last stage of deterioration for an infertile egg, unless it begins to rot, due to the action of bacteria; but this latter condition is improbable. Fertile eggs pass by this stage quickly and become rots. Large numbers of eggs of this type are marketed with fresh eggs. Their condition could easily be avoided by proper management, such as removing broody hens, gathering eggs regularly, keeping them in a cool place, marketing regularly, and the like.

If an egg is frozen, the contents usually expand sufficiently to crack the shell. The crack usually extends the length of the shell, reaches through the shell membranes, and remains open, thus allowing easy infection of the egg contents. The cellular structure of the egg contents is also broken down to some extent, and the egg will not keep so well under any conditions as would a normal egg. Chilling has an effect similar to freezing on the keeping quality of eggs, although this effect is not always so immediate. It is necessary to collect eggs twice daily during very cold weather, and care should be taken to prevent chilling while the eggs are being held or shipped.

Eggs are sometimes dipped into hot water in order to prevent their being used for hatching. This is a foolish and unjust practice. It is sometimes done with the purpose of deceiving the dealer concerning the freshness of eggs, but for this purpose it has to be done so carefully that it is very seldom undertaken. If an egg is dropped into water of just the right temperature, a very thin film of hardened albumen is formed just inside the shell, and this makes the egg yolk appear relatively less distinct and the egg consequently fresher than it really is.

A medium-boiled egg has the appearance shown in Plate III, section 24. The harder the egg is boiled, the more opaque it will appear. The size of the air cell is determined, of course, by the amount of evaporation that had taken place before the boiling was done. Sometimes the same results may be obtained if an egg is allowed to lie exposed to the direct rays of the sun during a very hot day.

It has already been shown that the lack of moisture in the surrounding atmosphere causes evaporation in eggs. On the

other hand, though not so frequently, too much moisture has results that are just as serious.

When eggs are held for a long time in an atmosphere that is too humid, such as in some cold storage warehouses, they may develop a musty odor and flavor. This condition is increased on heating. The cause for the development of mustiness in eggs is not known, but it seems to be due to the presence of an excess of moisture for a long period.

Molds often develop inside the shell membranes of eggs. These molds appear to the candler either as small dark dots or as larger dark areas. The mold developments are often collected along the line of the air cell or along checks in the shell. When the shell is opened, the mold is usually found adhering to the inner shell membrane, appearing like a lump of dense albumen. Mold-spot eggs are, of course, unfit for food. The formation of mold spots can be prevented by avoiding an excess of moisture where the eggs are kept.

The action of various types of bacteria on the contents of eggs causes the development of various grades of market eggs. The entrance of bacteria into an egg may possibly take place before the egg leaves the body of the fowl; but usually the bacteria enter when the egg becomes checked or after it comes into contact with moisture, after which the bacteria seem to be able to penetrate the shell and the shell membranes. The best way to avoid bacterial deterioration of eggs is to avoid fertilization, and then to keep the eggs clean, dry, and whole by careful handling. An egg is naturally protected by its bactericidal albumen, but this is not always sufficient.

Eggs that have become soiled have probably been moistened at the same time. This moisture, in mud, droppings, wet litter, or grass, is laden with bacteria of various types. These gain access into the interior of an egg, enter the yolk, and develop there. Such a condition can be avoided only by having the grounds, houses, nests, gathering pails, and the like, clean. In cleaning eggs, great care should be taken not to wet the shells any more than is necessary. This can be accomplished by wiping the shells with a slightly dampened cloth and some abrasive substance such as bon ami, sapolio, or something of similar nature. No acids should be used. Eggs that have not been soiled or moistened will keep better than those that have been cleaned; therefore cleaned eggs should be handled carefully and disposed of as quickly as possible.

The development of bacteria within an egg may assume many different aspects, but usually, and especially in the case of fertile eggs, the product is one of a series of rots. This greater susceptibility of fertile eggs is due to the usual presence of a disintegrating dead germ. These grades of rots vary considerably in quality and appearance, but they have been roughly subdivided into white rots, mixed rots, and black rots. Eggs of all these grades are absolutely unfit for food purposes. Rots can be largely prevented by avoiding the possibility of fertilization and the bacterial infection of an egg after it is produced. It is only in very rare cases that an egg has been found to be seriously infected with bacteria when it left the body of the hen.

White rot, or sour egg.—The white rot—often termed sour, or addled, egg—is about the first stage of bacterial decomposition. To the candler an egg in this condition appears to have an enlarged air cell, but otherwise it seems to be very nearly normal. By close inspection the candler can detect the homogeneous nature of the egg contents in contrast with the normal appearance of the yolk and the albumen. The air cell is often broken and the egg contents have a slimy appearance. As the egg is twisted before the candle, the mixed dark and light streaks pass the line of vision and usually show distinctly that the egg is addled, or thoroughly mixed. When the egg is opened, the contents are usually light yellow in color, very watery, and mixed. Parts of the vitelline membrane are usually visible, and parts of the yolk may be partially solidified. The egg usually has a sour odor, and for this reason it is often termed a sour egg.

Mixed rot.—When the contents of the white rot have darkened perceptibly, representing an advanced stage, the egg is usually termed a mixed rot. Some parts of the contents may

be darker than others. The air cell is broken. When the egg is opened, the contents are found to be very watery, and various colors are usually mixed together. A distinctly mixed odor of sulfur and sourness may usually be detected.

Black rot.—The last stage of the rot series is the black rot. In this stage the liquid contents of the egg appear to be very dark. The air cell is broken and there is a large amount of air in the egg, allowing the contents to shake about inside the shell. Very often the condition of the interior may be detected by the grayish appearance of the outside of the shell. When the egg is opened, a very distinct and offensive odor of sulfur is apparent. The yolk contents are of an oily black color, usually with yellow particles of sulfur floating on the surface. The yolk contents are usually, but not necessarily, mixed with the albumen. The albumen is very watery, often being similar in appearance to sour whey. These eggs are useful only as fertilizer or for a few other possible commercial purposes.

Many eggs become cracked, due to frequent frightening of the hens, poor nests, nests placed high from the floor, careless methods of handling and packing for shipment, and so forth.

If an evaporated egg is roughly handled, as in shipment, the inner membrane is sometimes ruptured, thus leaving the air as a free bubble in the albumen. Eggs of this class can be detected by candling. Such eggs are not necessarily poor eggs, as is commonly supposed; they merely show the effect of evaporation and rough handling. After the membrane is ruptured, the eggs evaporate much more rapidly than before and the albumen becomes watery. Eggs of this kind should be used as soon as possible.

If an egg is cracked after it leaves the body of the hen, and if the check in the shell is so slight as to allow no leaking of the egg contents, the egg is termed a check. A check in the shell provides an easy entrance for bacteria, and very often leads to excessive evaporation, stuck yolk, mold spots, and the series of rots. As soon as checked eggs are found, they should be removed from the others in order to avoid their leaking and soiling clean eggs and in order to avoid infection. They should be used as soon as possible.

If a check in the shell is so open that the contents leak, the egg is termed a leaker.

Sometimes a partly formed shell seems to become cracked while the egg is yet in the uterus. These fine cracks are then filled in with more shell, or at least with the gelatinous coating, before the egg is laid. The shell appears almost normal when the eggs are handled in ordinary light. These eggs are very easily broken in transit, and if possible they should be separated and sold locally by the producer, thus avoiding breakage and an undesirable smearing of other eggs.

It is becoming more and more necessary for food products to be held over from the season of plenty to the season of scarcity. This may be done in large or small amounts. Eggs are particularly adapted to being held in small quantities by the housewife, or in large quantities by producers, dealers, institutions, and the like. During the past years many consumers have been prejudiced against every sort of egg that was not strictly fresh. The writer believes that this prejudice was aroused by the unjust uses made of the preserved products. For instance, in some localities the best grades of cold storage eggs have been sold as fresh, leaving only the poorer grades to be sold as cold storage. This action gives the wrong impression as to the quality of the average cold storage egg. This condition of affairs, however, is changing, and the processes of preserving eggs are coming to be of vital importance to every one concerned with the egg supply.

Many methods of home preservation have been tried, especially in recent years—that is, since about 1898. Some of these methods are: packing eggs in dry table salt, bran, oats, or sawdust; preserving them in dry wood ashes, powdered sulfur, powdered gypsum, salt brine, slaked lime and salt solution, sugar, limewater, or various solutions of water-glass; covering with vaseline, paraffin, patented preparations, butter, or lard. A few other methods have been tried experimentally, but they are too dangerous for ordinary use. These include preservation in potassium permanganate, in salicylic

acid, in gum arabic and formalin, in gum arabic and salicylic acid; and dipping the eggs in sulfuric acid and sealing in glass jars. Of all these methods of preservation, the lime-water and salt solution and the water-glass solutions seem to give the best results. Water glass usually gives the better results of the two, because of the chalky taste that can be detected in eggs preserved in the limewater and salt solution.

Limewater and salt solution.—The method of making this preservative is as follows: Slake four pounds of good quicklime in a small quantity of water; mix with four gallons of pure water; add two pounds of salt. Stir the mixture thoroughly several times, then allow it to settle. Pour off the clear liquid. The clear liquid is the part in which the eggs are to be preserved. There is about enough of this mixture when made by this rule to preserve thirty dozen eggs. The number, however, depends somewhat on the shape of the vessel used. This is one of the oldest methods employed, and is usually recommended as reliable.

Water-glass solution.—The water-glass preservative is prepared as follows: Mix one and one-half quart of the commercial water-glass solution with eighteen quarts of pure water; water that has been boiled is preferable. Stir the mixture until the ingredients are thoroughly mixed. An earthen jar is the most suitable vessel for the mixture, although a tight odorless tub may be satisfactory. Two eight-gallon jars are sufficient for thirty dozen eggs, using the quantity of solution prescribed above. After the water-glass is thoroughly mixed, pour it into the different vessels to be used, being sure that the vessels are absolutely clean. It is expected that in the near future a convenient form of water-glass powder will be on the market, thus avoiding the use of commercial solutions varying greatly in strength. If more water is needed in order to cover the eggs sufficiently, this may be safely added to the amount of five quarts of additional water to each one and one-half quart of the original commercial water-glass solution used.

Eggs preserved by these methods have a relatively small air cell at the end of ten months. If the eggs have been kept in a cool place, the yolks appear well up in the albumen, and fresh, although slightly darker than the yolks of fresh eggs. The deposit of lime or water glass can usually be detected on the outside of the shells. When opened one of these eggs usually possesses a characteristic pink albumen. The albumen is also very watery. The yolk is somewhat flattened because of the weakened vitelline membrane, and is also somewhat darkened in color. If the egg is infertile, the yolk is usually less changed in color than if the egg is fertile. Limed eggs possess a distinct chalky odor and flavor. If salt is added to the limewater as specified in the formula given above, this objectionable feature is largely avoided. Normal water-glass eggs possess practically no foreign odor or flavor. Eggs preserved by either of these methods are usually satisfactory for home use, but are difficult to handle on the market, because of the ignorance of customers as to their desirability.

The practice of placing eggs in cold storage is being gradually perfected, so that it is coming to be a distinct economic benefit to both producers and consumers. The enormous investment necessary for the erection of a cold storage plant has tended to keep the business in the hands of capitalists. If the cold storage business is properly controlled, market conditions will be greatly improved by the presence of this industry in the field.

In order to properly hold eggs in cold storage, it is necessary that great care be given to uniformity of temperature, humidity, ventilation, condition of the eggs being put in storage, packages used, cleanliness of the rooms, and like factors. Because of this it is advisable for most persons to store their eggs in a large commercial storage house, rather than to endeavor to operate a small private plant.

The cold storage egg appears much better than the home-preserved egg immediately after removal from the storage room or preservative. However, the storage egg deteriorates very rapidly after being removed from the low temperature, and soon becomes of about the same quality as the home-preserved egg. The fact that cold storage eggs can usually be

boiled without cracking, and the greater transparency of the albumen, cause them to be much more popular on the general market than are home-preserved eggs. They are suitable for nearly all household uses. Due to the long holding and possible variations of temperature, humidity, ventilation and the like, cold storage eggs are particularly susceptible to molds, mustiness, foreign odors and flavors, and bacterial infection; therefore they must be carefully examined for these defects.


No. 2 cold storage eggs.—Here the air cell is greatly enlarged, and the yolk is darkened and somewhat sunken in the albumen. If this egg is opened, it will be found to be very watery, the yolk flattened, and the albumen of a distinctly darkened tint. The vitelline membrane will be so weak that it will usually break as the egg is opened. These eggs are suitable for cooking purposes, and might well be used for this purpose by city persons of moderate means. The condition of this type of egg is caused either by poor storage methods or by the poor condition of the egg before it was put into storage.

Consumers might well make a practice of buying surplus eggs during the early spring months, when the eggs are of better quality, and preserving these eggs for use during November, December, and January. The total costs for cold storage, including transportation, storage charges, insurance, recandling, loss due to deterioration, and interest on investment, very seldom amount to more than five cents for a dozen eggs, if conditions of handling are correct.


Cracked and broken eggs, as well as many of the other inferior grades, are being prepared as either a dried or a frozen product. These products are very satisfactory, especially for hotel or bakery use, where uniformity is an essential feature. The dried egg products are convenient for use in private families and camping parties, since they may be used satisfactorily for many purposes as substitutes for fresh eggs. Unless mixed with other substances, there is usually an objectionable sweet taste in the egg powder. One's appetite for egg products, however, could probably be cultivated if they were used habitually. These products are manufactured principally in the States of the Middle West, where many of the large egg packing houses are located.

Excessive evaporation of eggs is caused by dry air passing rapidly over them. Warm air will cause more rapid evaporation than cold air. At any given temperature the amount of evaporation will be decreased by increasing the moisture in the air. The amount of moisture must not be excessive, however, or the eggs will become musty and mold spots will develop. With a given amount of moisture in the air, the danger from molding will be lessened by lowering the temperature of the air. Eggs vary considerably in the relative thickness and weight of their shells. The thicker shells may be expected to directly limit the rate at which eggs will evaporate; this leads to the conclusion that for this reason alone fowls should be supplied with plenty of lime. It may also be expected that the structure of the shell membranes influences the rate of evaporation. Very porous shells may be easily detected by candling or by the general appearance of weakness or transparency. Since individual fowls may possess the special characteristics of laying eggs of a definite type, by careful selection it should be possible to eliminate those fowls that produce the eggs most liable to excessive evaporation.

A cellar or a refrigerator is ordinarily the most desirable place available for keeping eggs. In the average cellar excessive dampness may be avoided by placing the eggs on a table or a shelf, thus keeping them at a short distance above the floor. Eggs may usually be held for two or three weeks under these conditions, with very slight evaporation. Kitchens, sheds, or similar rooms should be especially avoided. If eggs are to be held for several days, they should be kept in pails, boxes, or similar receptacles, which will prevent the free circulation of air through the packages and yet will allow a moderate amount of ventilation. If eggs are held in cool, dry air long enough, all the moisture will evaporate and the yolk and albumen will become a dried mass. No other deterioration will take place.



Gleanings from the World of Foods



A CIRCULAR from the Department of Commerce, Bureau of Census, comparing the census of manufacturers of butter, cheese and condensed milk for the years of 1909 and 1914, shows that 786,013,489 pounds of butter were produced in 1914, with a total value of \$223,179,254, an increase of 25.3 per cent in quantity and 23.9 per cent in value.

The production of cheese in 1914 totaled 377,506,109 pounds, valued at \$50,931,925. The increase here is 21.3 per cent in quantity, and 17.8 per cent in value.

The output of condensed and evaporated milk for 1914 was 884,646,761 pounds, valued at \$59,374,048. This was an increase in quantity of 78.6 per cent, and in value of 76.8 per cent. The production of powdered milk, which was first reported separately in 1914, amounted to 21,987,911 pounds, valued at \$2,081,607. The production of sugar of milk, first reported separately the same year, was 4,051,320 pounds.

In accordance with the Supreme Court decision that the modification of the women's hours of work law was unconstitutional, the industrial commission has notified the peacanners of Wisconsin that they cannot be allowed to employ women in the busy season over the hours set for other work. The commissioner's letter says: "Women may be employed not to exceed fifty-five hours in any week and not to exceed ten hours in any one day. This schedule is limited by the following: Between the hours of 8 p. m. and 6 a. m. women may be employed not more than eight hours in any one night and not more than forty-eight hours in any one week."

The commission in explaining its order says further: "Appeals to the commission for any change in the statutory limitations will, of course, be futile, for the reason that the commission is no longer clothed with such authority."

LESS BUTTER IN STORAGE.

Figures compiled by the Warehousemen's Association and issued recently, give the stocks of butter in cold storage at all points in the United States as 41,833,000 pounds compared with 43,153,000 pounds on July 1 last year. This shows a decrease of 1,320,000 pounds. On June 1 stocks were 4,256,000 pounds compared with 11,510,000 pounds on the same date last year. The indicated increase in holdings on July 1 over June 1 this year is due solely to the increase in make at all points during June. The month of June is considered the period of greatest make in the year.

Stocks of eggs in storage on July 1 are given as 3,559,000 cases compared with 4,101,000 cases on the same date last year. This is an indicated decrease in storage holdings of 542,000 cases. Stocks in storage on June 1 were 2,907,000 cases compared with 3,433,000 cases on June 1 last year. The decrease indicated is 526,000 cases.

BOOTH COMPANY EXPANDS.

Organization of the Booth Fisheries Company, limited, of Canada, with \$1,000,000 capital stock, which will be controlled by the Booth Fisheries Company of Chicago, was announced recently. The new corporation is to operate throughout Canada, but was formed primarily to take over and operate the New Brunswick Sardine Canning Company, whose plant near St. Andrews, N. B., is said to be one of the largest of its kind in the world. Operation of the canning plant is already being conducted by the new Booth subsidiary.

In 1912, the Booth Company had plans for extensions on a large scale in Canada, and at that time acquired important concessions from the Newfoundland colonial government; but this project has since then been dormant. Officials of the Booth Company are noncommittal as to whether it will now be revived by the new Canadian company.

SARDINES COSTS INCREASE.

Advices from Eastport, Me., recently said the sardine fish-

ermen in that section at a recent meeting agreed to hold prices on raw fish at \$10 a hogshead during July and August. Packers have been notified of the action. According to New York factors this will mean continued high cost of the finished product to canners, and lessened profits unless the increased cost is added to the canned article. From the best information obtainable the pack to date is less than 80 per cent of that at this date last year. In connection with the situation a prominent factor said:

"The situation is decidedly unfavorable to the packer this year. We figure a further shortage in available of 10 per cent due to the rigid inspection of fish by the National Canners' Association and 10 per cent due to exports. The advance on raw fish by the fishermen will mean a lessened output in some quarters and a material increase in the cost of the finished article. Usually in August the raw fish cost the packer around \$5 to \$6 a hogshead."

SAUERKRAUT PRICE HIGHER.

The increase in prices of foodstuffs and fuel in the city of Vienna since the outbreak of the war is brought out in striking manner by a list of prices issued by the director of the public markets of the Austrian capital and summarized in the London press. The figures deal with the average prices during the first five months of 1914, 1915, and 1916, and show the following increases:

- Potatoes and sugar, 20 per cent.
- Coal, petroleum, milk, bread, sauerkraut, 50 per cent.
- Corn meal, butter, eggs, 100 per cent.
- Wheat flour and onions, 200 per cent.
- Bacon, lard, beans, 250 per cent.
- Horseflesh and beef, 300 per cent.
- Pork and margarine, 350 per cent.
- Peas and rice have disappeared from the markets.

BEET SUGAR INCREASE.

The value of the annual production of the beet-sugar factories of the United States increased 30.1 per cent from 1909 to 1914, according to figures concerning the industry which have been compiled by the United States bureau of the census. A preliminary statement from the bureau gives the quantities of materials and the values of the different products manufactured in the two years that are compared.

Reports were received from sixty-five factories engaged in the manufacture of beet sugar, the majority of which reported for the season of 1913-14. The products for the year were valued at \$62,605,209. At the census of 1909 there were reported sixty-five factories, with products valued at \$48,122,383. The value of the annual production, therefore, has increased by \$14,482,826.

The sixty-five factories reported in 1914 used a total of 5,639,103 tons (of 2,240 pounds) of sugar beets, from which was produced 739,233 short tons (of 2,000 pounds) of granulated sugar, valued at \$58,351,323; 4,240 short tons of raw sugar, valued at \$39,142; and 26,461,291 gallons (of 12.2 pounds per gallon) of molasses, valued at \$1,536,192. In addition, there were subsidiary or by-products valued at \$2,478,552.

Of the sixty-five factories reported in 1914, 15 were located in Michigan, 13 in Colorado, 12 in California, 7 in Utah, 4 in Idaho, 3 in Wisconsin, 2 in Nebraska, 3 in Ohio, and one each in Kansas, Montana, Illinois, Indiana, Iowa and Minnesota.

"PINE" SITUATION PUZZLING.

It is reported that eastern grocery jobbers are up in arms over the Hawaiian pineapple situation and it is more than hinted that complaint has been made to the Department of Justice of the United States charging that Hawaiian pineapple growers and packers are in a combination to control prices of the product; that there is a conspiracy in restraint of trade and a violation of the Sherman and Clayton laws.

It appears that the Hawaiian pineapple packers, of whom there are only eight or ten and of whom three or four pack the bulk of the crop, have taken drastic positions this year in the matter of "shading" list prices and the opening prices of all the companies were practically identical. As a matter of list, this was not perhaps surprising, but the firmness with which all packers have refused to listen to the demands of jobbers for concessions from the list has been something unique.

Depending on the experiences of past years, many of the larger jobbers have thus far refused to place their orders, relying on the probability that such an attitude would force the packers into a concessionary mood, but it does not appear to have worked, and report has it that late buyers are getting worried as to their ability to book orders for actual needs, while the packers are stiffer than when the first prices were made two weeks ago. Already advances of from 5 to 7½ cents a dozen are reported and other advances are threatened shortly.

Small jobbers have generally accepted the goods at the opening prices, and are disposed to smile at the futile efforts of the late comers to secure confirmations at their offers. Large sums of money are said to have been expended in transcontinental wiring and telephoning, but thus far without having developed any weakness among the packers. This is so unusual that some of the dissatisfied jobbers are said to have reported their suspicions to the Department of Justice, claiming that a "conspiracy" is at work to maintain prices illegally.

SEA MUSSEL EXCELLENT FOOD.

The sea mussel, one of the best and most abundant of sea foods, according to a bulletin recently issued by the United States Bureau of Fisheries, furnishes an example of waste of natural resources in America through failure to utilize it. In Europe the sea mussel is one of the most highly regarded shellfishes. Great Britain and Ireland consume about 35,000,000 pounds and little Holland over 65,000,000 pounds a year. In France about 400,000,000 pounds are produced annually and cooked in ways to delight the epicure. Yet in the United States practically no sea mussels are used except as bait or fertilizer.

Sea mussels are closely related to clams and oysters. They should not, however, be confounded with the fresh water mussel. As a nutritious and wholesome food they are equal to either clams or oysters, and many persons regard them as superior in flavor. They rarely fail to please the taste of the lover of sea foods, and the experiment of having them presented on the menus of some of the prominent hotels has met with immediate success.

Since they are abundant and easily taken, sea mussels are cheap. They are found in dense beds yet untouched, accessible to the markets, and easily reached by tongs and dredges. They can be placed on the markets at a lower cost than can either oysters or clams, and a barrel of mussels contains more edible material than a barrel of oysters. The quantity of actual nutriment contained in the edible portions (the meat and liquor) of the mussels is slightly greater than in oysters and clams, and the mussel therefore contains at least as much food, pound for pound, as is found in related shellfish in common use. As the shells are thinner a bushel of mussels contains considerably more foodstuffs than an equal quantity of oysters.

A peck of sea mussels in the shell will supply all of the meat required for a meal for ten persons.

Sea mussels are among the most easily digestible of foods, as has been demonstrated by the experience of consumers. Persons of weak digestion have found that they can eat sea mussels with impunity when meats cause them to suffer.

Sea mussels possess the advantage of being in season when oysters are out of season. But comparatively few oysters are marketed from April to September, and this is the season at which mussels are at their best on the coast of the New England and middle Atlantic states.

Sea mussels are found on the Atlantic coast from the Arctic ocean to North Carolina, and on the Pacific coast as far south as San Francisco. Along the shore of New England,

New York and New Jersey they exist in beds of great productiveness.

As in the case of all animal foods there are conditions under which sea mussels should not be gathered or eaten. Dead or stale mussels are apt to contain the same dangerous decomposition products, ptomaines, as are found in other stale or putrefying animal foods. They should be alive when purchased, and this can be determined by observing if the shells are closed. If the shells gap the mussels are either dead or weak and possibly dying, and should not be used.

Mussels, like oysters, should not be used from sewage polluted waters, and, therefore, should not be taken from the vicinity of towns or on densely inhabited shores. They should not be taken from pilings, rocks or shores exposed at low water, as in such locations they may become polluted or the liquor may become slightly decomposed by exposure to the warm air and sun.

For use in the fresh state, mussels should be purchased in the shell, and consumers should be careful to wash them well before cooking. The only inedible part, except the shell, is the little tuft of black hairs known as the byssus, or beard, which is readily detached after cooking.

Canned mussels of good quality, preserved either in their own juice or pickled in vinegar and spices, are now prepared by a few firms on both Atlantic and Pacific coasts. Thus prepared, they retain their tenderness and most of their natural flavor. Mussels may be cooked in the same ways as oysters and clams.

GETTING RID OF ANTS.

As long as conditions are such as to attract ants, measures for getting rid of the insects will be of little value, says a new publication of the U. S. Department of Agriculture, Farmers' Bulletin 740, by C. L. Marlatt. The first step in freeing a place from these pests is therefore to clean up all food that may be scattered about and to keep food supplies which may attract ants in antproof metal containers, or in iceboxes. Cake, bread, sugar, meat and similar substances are especially likely to attract the insects.

The use of baits is not recommended in the bulletin already mentioned because of the danger that these will serve merely to draw more insects into the house and thus actually to increase the nuisance. Where it can be safely used, however, a sirup poisoned with arsenate of soda has been found effective. The formula for this sirup is one pound of sugar dissolved in a quart of water to which should be added 125 grains of arsenate of soda. This mixture is boiled and strained and on cooling is used to moisten sponges which are placed where they can be reached easily by the ants. The insects collect the sirup and convey it to their nests, so that the whole colony is ultimately poisoned. Although this method has been found effective, as has been said, it should be remembered that the arsenate of soda is poisonous to human beings and to animals as well as to ants and that its use must be safeguarded by the greatest precautions.

When the ants can be traced back to their nests and these are in accessible places, it is possible to destroy the colonies by injecting with an oil can or small syringe a little bisulphide of carbon, kerosene or gasoline into the nests. All these substances, however, are inflammable and precautions must be taken, therefore, against the danger of fire.

Though the common garden or lawn ants which build their little crater nests around houses are distinct species from the true house ants, they may find their way into the house. Their colonies may be destroyed by drenching the nests with boiling water or injecting a small quantity of kerosene or coal oil into them. Where larger areas are affected it is sometimes advisable to spray the lawns with kerosene emulsion or with a very strong soap wash prepared by dissolving any common laundry soap in water at the rate of one-half pound to one pound of soap to a gallon of water. Another method is to inject bisulphide of carbon into the nests, the quantity of the chemical depending upon the size of the nest. After the bisulphide of carbon has been injected, the entrance to the nest should be closed by the foot in order to retain the chemical, which will then penetrate slowly through the underground channel and kill the ants.

Criminal Negligence in Matter of Fire Prevention—Vast Majority of Fires Could Be Avoided by Proverbial Ounce of Prevention—Carelessness Should Be Punishable by Law

Address of F. H. WENTWORTH, before National Wholesale Grocers' Association

THE awakening of a people to any great economic fact concerning their public or private welfare is always a matter of profound importance. The recognition by the people of the economic significance of the fire waste has been retarded both in the United States and Canada by an attitude of mind bred by residence in a country of apparently boundless natural resources. Those who are born to great wealth and who accept such an environment without original thought, do not usually realize the sources from which such wealth is drawn until a curtailment of the supply precipitates an investigation. The thought to which the American mind has long been a victim, namely, that our natural resources were unlimited, has resulted in the disregard of our created resources as well. Our country, year after year, has suffered frightfully in the loss of its standing timber. This loss, with slight encouragement from man, nature herself through the years will attempt to restore. Nature cannot, however, restore the artificial creations of man, and everything which is made for human comfort by man's creative energy requires a similar and sometimes a greater output of energy for its replacement.

ANNUAL PER CAPITA FIRE LOSS.

The United States Government Department of Commerce and Labor shows that the average annual per capita fire loss in six European countries is 33 cents, while the average per capital loss in the United States is \$3, and in Canada \$3.07. Glasgow has an annual fire loss of \$325,000. Boston, smaller than Glasgow, has an annual fire loss of \$2,000,000. Berlin has an average fire loss of \$175,000 a year. Chicago, the same size, averages \$5,000,000 annually. The Berlin fire department costs \$300,000 a year; the Chicago fire department costs \$3,000,000. These figures are sufficiently impressive, but they are not typical of these cities alone; they are typical of the entire United States and Canada as contrasted with Great Britain and the nations of Europe.

What is there in us, in our people, in our character, to explain this? What is the reason for this shameful contrast in the amount of property destroyed by fire? Is the explanation in a sense psychological? It is only within the last half dozen years that the United States has given any thought whatever to the conservation of its natural resources. But we are now entering upon a new era, and a great deal of attention and thought is being given to this problem.

The National Fire Protective Association has members in all walks of life. This fact brings us close to the people and their thought currents. We are engineers and special students of the fire waste, the social and economic results of which are often clearer to us than to the underwriters themselves. It is obvious to us that insurance rates cannot be reduced irrespective of the loss ratio without forcing insurance companies which mean honestly to pay their losses to retire. Capital invested in underwriting is not so irrevocably fixed as capital invested in public service corporations using public property or rights-of-way. Such investments can be controlled easily by the state, but capital invested in

underwriting can easily seek other channels and withdraw from the states imposing undesirable burdens upon it thus leaving the business world without the desired indemnity.

SCIENTIFIC UNDERWRITING IMPOSSIBLE.

Recently in the legislatures of three states, New York, Illinois and Wisconsin, an investigation was undertaken of the methods and practices of the fire insurance business. This action found its impulse in hostility toward the fire underwriting interests, but all of these investigations developed the fact that scientific or satisfactory underwriting is impossible, and will continue to be impossible until the criminally careless fire waste of the country is curtailed. It is obvious that these investigations represent an incoherent protest against the frightful impoverishment of the nation by the fire tax. The people feel that the fire tax is too high. It is too high. Everybody knows that it is too high. But how can the fire tax be lessened except by attacking the cause of it? This is the question every representative body must be forced to answer.

Our waste of \$3 per capita per annum means that every man, woman and child pays \$3 a year for fire waste. That means that the man with the average family, his wife and three children—a family of five—pays \$15 a year fire tax. The United States Government in its report adds to this fire waste the cost of maintaining fire departments, which is as much more. This means \$30 a year to the average family. If on some blue Monday in every year a representative of the Government were to come around and ask us each for a check for \$30 to pay our share of the national carelessness, then we should realize what we pay. But we do not realize that we pay it, because this tax is indirect.

The big manufacturers and the big merchants know that this fire expense is a tax. They equip their premises with automatic sprinklers. They put in protective apparatus. They get the lowest insurance rate they can because it helps them to compete, but the man in the street, the ordinary man, does not know how this fire waste is paid. Take wool, for example. Wool in the warehouse is insured—that is a tax. It is insured in transportation, and there it pays a fire tax. It is insured in the textile factory, where it is worked up into cloth. It is insured in the clothing store, insured in the tailor shop, in the department store, and all the way along this fire tax is added to the cost, and when we buy a coat, we pay it. Every stock of goods that is insured carries this tax, and it is passed along to the ultimate consumer. The masses do not know that they pay it. They do not realize that when they buy a hat, or a pair of shoes, or a suit of clothes, or anything which goes through the regular channels of industry, production, distribution and exchange, they pay this tax. Not realizing it, they are indifferent to fire. They think fire does not affect them.

ECONOMIC WASTE ENORMOUS.

The fire loss in the United States and Canada for the last ten years has averaged \$230,000,000 a year. What could we do with that? We could build roads, build canals, improve our harbors, build battleships—if we have no less mediæval

use for our money. We could do a great many things with \$230,000,000 a year. What country can stand a drain like that? Suppose we were to throw into the sea \$230,000,000 in wheat or corn or cotton, or lose \$230,000,000 out of our national treasury. Then we would realize that we are being impoverished by this waste. But we have lost the faculty of being moved by an ordinary fire. In Europe a \$100,000 fire shocks the entire country. All the papers in Continental Europe comment on it, wanting to know how it occurred, who was responsible for it, whether the conditions obtaining in the city where it occurred can be found elsewhere, so that such a fire might be duplicated. But here in America if we take up the morning paper and do not find reports of two or three \$100,000 fires we think it has been a dull evening.

We are the most careless people with matches on the face of the earth. In Europe if you want matches you have to go where they are kept. In America matches are everywhere; on our bureaus, in our desk drawers, on the mantelpieces, library tables, in all our old waistcoat pockets in the closet. If we wake up in the middle of the night and reach out and cannot find a match we feel insulted. Every match is a potential conflagration.

EVERYBODY TOUCHED IN POCKET.

The fire waste touches the pocket of every man, woman and child in the nation; it strikes as surely but as quietly as indirect taxation; it merges with the cost of everything we eat and drink and wear. The profligate burning every year of \$230,000,000 in the value of work of men's hands means the inevitable impoverishment of the people. This fearful loss, spread over the entire business world of America, is beginning to manifest its impoverishment blight. The people feel it without yet being awake to its cause. Their awakening is retarded by the prevalence of the foolish notion that the insurance companies pay this colossal tax. But how could they remain solvent? They are mere collectors and distributors of that portion of this tax which is represented by their policies. Half of it they never touch; it falls upon the householder direct. San Francisco and Salem do not pay for themselves. We all help pay for them. And next year San Francisco and Salem, risen from their ashes, may help to pay for other cities. There is but one way in which we cannot escape the periodical paying for one another and that is for us all to begin rational building construction and then protect what we have builded against fire.

RATIONAL BUILDING CONSTRUCTION.

It is the ever-present conflagration hazard which makes any approach to scientific underwriting impossible. The conflagration hazard is not confined to any one city or state. It is present in every city and state of the Union. We have built largely of wood, and sooner or later we must pay the penalty unless we can find some way in which to protect our cities.

There is a way to solve this conflagration problem—not absolutely, but at least relatively. We cannot be expected to tear down our cities and rebuild them of fire-resisting material; the cities must be protected as they stand. In the heart of nearly every city there are streets crossing at right angles, along which for a very considerable distance are building of brick, stone and concrete. This shows a more or less complete Maltese cross of buildings which are not wood and which operate to divide the wooden-built district into quarter sections, and which might hold a fire in any one of these sections if they were equipped to do so. These brick and stone buildings are ordinarily valueless as fire-stops, because their windows are of thin glass and their window frames of wood. At Baltimore and San Francisco the conflagration attacked such buildings easily, breaking out the panes, consuming the frames, and converting every story of these brick structures into horizontal flues full of combustible contents. Brick and stone buildings are logical and capable fire-stops if the fire can be kept out of them. The small city that will trace out its Maltese cross of such buildings and equip them with metal window frames and wired glass will immediately possess the equivalent of substantial fire walls crossing at right angles in its center, dividing it into four sections. By such a simple, inexpensive, but yet

strategic procedure many a city may save itself the destruction which now awaits only the right kind of a fire on the right kind of a night.

IMPERATIVE IN LARGE CITIES.

I have referred in this plan merely to the smaller cities, but it is obvious that this form of protection is equally imperative in the brick, stone and concrete districts of all large cities where great values are housed in close proximity. Fires in the large cities entail an enormous waste because of the great values assembled there. We must come eventually to the equipment of all commercial, factory and office buildings with metal window frames and wired glass. This will mean the abolition of the conflagration hazard in our cities. Fires will then be unit fires, extinguished easily by a competent fire department within the building in which they originate; for the protection of window openings not only prevents fire from entering, but prevents fire from issuing out of the burning building. We may expect an occasional exceedingly hot fire to break down the defenses of an adjoining building, but it is obvious that a conflagration could not get under way among buildings of fire-resistive construction with properly protected window openings.

Having thus fortified city buildings one against the other, extensive fires within individual structures can be prevented by the use of the now well established automatic sprinkler system. The automatic sprinkler applies the water without the help of human agencies while the fire is still incipient. It will operate in a dense smoke as well as in a clear atmosphere. It will not throw excessive deluges of water in wrong places as the fire departments are continually forced to do. With our window openings protected and buildings equipped with such extinguishers, the conflagration hazard in mercantile districts will be eliminated. There will then remain for consideration our immense residence districts constructed almost wholly of wood surrounding the mercantile centers, like fagots around a funeral pyre. We can lessen the loss here by the abolition of the use of wooden shingles.

The prohibition of the shingle roof, which is now generally recognized as a conflagration breeder, is today almost universal within city fire limits, and from the more enlightened communities it is excluded altogether. Burning shingles can be carried great distances by the wind or draught of a conflagration, and when they may alight in their turn upon other dry shingles they make fearful havoc.

It will not be necessary to remove all shingle roofs immediately. An effective city ordinance might require all roofs constructed in the future to be of incombustible material, and that all roofs which shall hereafter require repair to the extent of one-third of their area shall be replaced with incombustible roofs. The modern shingle is thin, and the machinery which now makes it leaves a fuzzy surface which, after a period of drought, becomes like tinder. Without shingle roofs flying brands would not be carried over the brick centers of the city by the wind.

HABITS OF OUR PEOPLE RESPONSIBLE.

Outside of the abolition of the shingle roof, we must look for the protection of our homes to the corrected habits of our people. We must look carefully after the heating apparatus of our homes, giving them the constant and necessary attention demanded by receptacles containing fire. The building of proper flues and chimneys is especially necessary in connection with residences. Then we must have a general revision throughout the country of our building codes. We must stop the building of a certain shoddy class of building, and we must limit the height of all buildings. In Boston we limit them to 125 feet. There is no reason why cities that can expand, and which are not bound by physical barriers, should follow the example of New York and erect absurdly high buildings. They inflict an enormous expense upon the city for fire protection.

There are other matters, however, to which we must give proper thought. Among them is the best use of the fire-fighting agencies which have been established and which are maintained at a great cost by our people.

The mental habits of a people are a vital factor in affecting social progress. It is the mental habit of our people to

assume that fire departments are maintained for the exclusive purpose of extinguishing fires. It is obvious, however, that fire departments have large possibilities for service in preventing fires, a service which is, I regret to say, yet largely potential. Every fireman, from the chief engineer down to the drivers and pipemen, should be regularly detailed for inspection service. Three or four hours a week for each man, going into basements, attics, courts and alleys, keeping down accumulations of rubbish—which spring up over night—locating the storage of inflammable oils and explosives, would keep the city clean of its most persistent fire danger. Every fireman should in turn cover every section in the course of six months. One would thus check up the inspections of the other, and local conditions would become a matter for educative conversation about headquarters.

There is, however, a most important result to be achieved by such an inspection system over and beyond keeping the city clean, and that is the education of the fire-fighters in the exact physical character of the city. To know exactly which passageways are open and which are closed; to know which are fire walls and which are not; to have a mental picture of the exposures, the windows, the roof openings, the cornices, and all the other physical details important in fire-fighting, would so heighten the team work of a department that, like expert swordsmen, they could make their attack without loss of time straight at the vulnerable part. There are a few cities in the United States where such practice, partially in effect, has already demonstrated its singular efficiency. The citizens of every town and city should demand this sort of service from its fire department.

UP TO THE INDIVIDUAL.

Then we must begin to place the responsibility for preventable fires upon the individual. It is difficult to do that, I know, and yet it can be done. In France if you have a fire and that fire damages your neighbor's property you have to pay your neighbor's loss. That is very educative! It would be a very good thing if we had such a law in America. We can fix responsibility, however, and we can change our attitude of mind towards the man who has fires. When we look upon the man who has a fire as one who has done an unneighborly thing; as one who is a public offender unless he can prove that he was in no way responsible for that fire, then we will have begun to make headway. We must have inquiry into the cause of all fires, not merely an inquiry into the fire which is suspected to be the work of some incendiary. Nearly every fire is the result of some carelessness, and the careless man must be held up to public criticism as a man who has picked the pocket of the rest of us, because that is what it is in its last analysis. When we get fire marshals in every state or province who shall inquire into the causes of fires, I believe we will begin to correct our personal habits in respect to the things that cause fires.

SUGGESTIONS FOR PROPERTY OWNERS.

In conclusion I have set down certain specific suggestions to property owners which, in view of the above, may help a personal consideration of this problem, and understanding of what citizens may do to solve it, both for their own good and the good of the cities in which they live.

Property owners can do good service both in their own interest and in the interest of their community in this matter by first caring for the fire hazard of their own property, and then helping in any general local movement to eliminate the fire hazard from their city.

In a study of one's own property he should give specific attention to the following items:

Exposure Hazard. If your premises are surrounded or exposed to property that is inflammable or otherwise hazardous, you are paying for this danger in your insurance rate. Study your location and your exposure hazard and the reasonable means of bettering your own property (such as fireproofing doors and windows and outside walls, extending fire walls above roof, non-combustible roofs, etc.), so as to minimize this physical exposure hazard.

Construction. A large part of your insurance rate is always based on deficiencies in physical construction of your property. Study this (such as unprotected and horizontal

openings, too large areas undivided by fire walls, concealed spaces, etc.), and ascertain how they may be reasonably remedied, and how much improvement will reduce your insurance rate.

Protection. The best located and constructed property in the world without adequate fire alarm and extinguishing facilities may suffer from fire either in building or contents or both. Burning contents often ruin so-called fireproof buildings. Study the deficiencies of your property in this respect and better them (by installing metal waste and ash cans, fire buckets, chemical extinguishers, automatic sprinkler or standpipe systems, etc.), and you may find the investment highly profitable in the reduced hazard and rate.

Occupancy. Every business has inherent in it certain dangerous fire hazard characteristics. Study the nature of your business and properly care for and isolate material or processes which may unduly occasion or accelerate fires.

Equipment. Virtually all property must be heated, lighted and ventilated, and all this equipment, in addition to special apparatus required by almost every business, has fire hazard. Study the character of your equipment thoroughly before purchasing, and improve that which you now have.

Management. Keep your property clean. Half of all American fire waste comes from careless accumulation of dirt and rubbish, and disorder. Teach your people cleanliness and order, and organize them to detect and extinguish fire, and how to call the public fire department quickly when necessity requires.

Every owner can apply in his factory, apartment house, warehouse or home the above correctives, which constitute the essentials of Fire Prevention. He can also join any other good movements in community action to carry out the above program and to study and get prepared and enforced reasonable legal regulations whereby such correctives may be demanded in the law, and finally can back up public officials in seeing that they are applied.

The American people are not dull in comprehension, nor are they slow to act once the necessities of a situation are made clear to them. The awakening manifested by the annual observance of "Fire Prevention Day" in many cities of the United States, by the appointment of fire marshals and the amendment of fire marshal laws, and by the teaching of the fire hazards in many public schools, indicates that we as a people will not much longer tolerate our pitiful impoverishment by fire waste. It is true that so long as our wooden cities stand they must occasionally suffer disastrous fires, with, oftentimes, shocking loss of life, but with the growing disposition to hold our citizens personally responsible for their carelessness before the bar of public opinion, many of our most prolific causes of fire will disappear.

Our civilization grows daily more complex. Every man's life is becoming more inextricably linked with the lives of others. An injury to one is increasingly an injury to all. Out of a proper realization of these facts is coming a larger sense of civic responsibility. As citizens of a common country and brothers of a great international family, we may some day evolve a civilization in which there shall be no waste and in which the thought of the common good shall be the profoundest impulse in the hearts of our people.

—

Holders of common shares of the American Cotton Oil Company are assuming from inferences made in the annual report that the present dividend rate of 1 per cent will be continued through the next three quarters. Officials of the company have not corrected this impression and probably will not, according to advices from New York. Dividends aggregating 4 per cent are expected to be paid out of the net earnings of the company before Aug. 31, 1916, the end of the current fiscal year. Such action would necessitate disbursements of about \$810,000 or about 56¾ per cent of the net for the fiscal year of 1915, and would leave a balance to be added to profit and loss amounting to \$600,000. Definite decision on whether or not the 4 per cent annually will be continued next year probably will be made next November. The American Cotton Oil Company is facing an increased unit cost in its seed crushing operations.

Collecting Bad Accounts by Mail

SLOW and bad accounts cause the average business man much annoyance and loss, and are often the direct cause of bankruptcy. It, therefore, follows that any method of handling them that shows a maximum of efficiency with a minimum of effort, friction and expense is worthy of serious consideration.

This article will outline a system that is the result of over fifteen years' experience of an attorney and credit man for several large business houses. It is adapted to either a large or small business and has "made good" wherever adopted.

The basic idea is that a business man can, in most instances, handle his own collections to better advantage than by turning them over to collection agencies or others, and that it is neither necessary or politic to use bluffing or intimidating methods.

It has been found that the basic elements of a successful collection system are persistency and courtesy, not bluffs and threats. You know that a severe storm, or a series of them, will have small effect on stone, while a constant dropping of water on the same spot will wear it away.

The system here outlined consists of five letters and a legal postal card follow-up system, and will keep after the slow debtor over forty-five days at a total postage cost of not exceeding twenty cents. The forms given for the letters are to be written on the letter heads of the business house using them, and the card form on ordinary government postal cards. They will not be nearly as effective if printed and afterwards "filled in," and they are so short it is not all necessary to do so, even where several hundred accounts are involved, as only twenty-five minutes of a typist's time is required on any one account, even if it is necessary to continue the system to the very last card, which will very seldom happen.

When intending to use this system on a certain number of accounts, it is best to make an alphabetical list of them on a long sheet of paper, noting the name, address, amount and date of the last item, leaving about an inch of blank space after each account in which to note the dates of mailing the form letters and cards. When an account is paid or satisfactory arrangements made, it should be crossed off the list, thus leaving a correct list for the next mailing.

LETTER NO. 1.

Mr. Slow Pay,
Chicago, Ill.
Dear Sir:

In looking over our books to-day we find a past due balance standing against you in the amount of \$——, running back to ——.

Will you kindly mail us your check for this amount, or advise us at once if you find the balance incorrect.

Thanking you in advance, we remain,
Yours very truly,

CREDITOR & CO.

LETTER NO. 2.

Mr. Slow Pay,
Chicago, Ill.
Dear Sir:

We wrote you —— regarding a past due balance on your account of \$—— running back to ——, and so far have received no reply.

Please let us hear from you at once, so that we will know whether you consider the balance correct, and when we may expect your check.

Yours very truly,
CREDITOR & CO.

LETTER NO. 3.

Mr. Slow Pay,
Chicago, Ill.
Dear Sir:

Our letters of —— and —— regarding a past due balance on your account of \$—— running back to —— remain unanswered.

It certainly seems to us that you might at least grant us the

courtesy of an answer, even if it is inconvenient for you to send us your check just at this time.

Kindly favor us in this regard, and oblige.

Yours very truly,

CREDITOR & CO.

LETTER NO. 4.

Mr. Slow Pay,
Chicago, Ill.
Dear Sir:

We are much surprised at your failure to answer any of our several letters regarding your past due account. Our letters have certainly been courteous, and we feel that we have treated you fairly in every way.

You know, of course, that unless we hear from you, we will be compelled to adopt other means of collection, which we very much dislike to do.

It will save both of us useless expense and annoyance if you will write at once, stating just what you propose to do.

The writer will hold this account on his desk until the morning of ——, and will depend upon hearing from you by that time.

Yours very truly,
CREDITOR & CO.

LETTER NO. 5.

Mr. Slow Pay,
Chicago, Ill.
Dear Sir:

As we did not hear from you this morning, we had fully decided to take other steps to enforce settlement of that past due account.

However, a business acquaintance advises us that he believes you to be entirely prompt and reliable, and we have therefore decided to wait a few days longer.

You must surely realize that your credit standing depends on your fair dealing, and fair dealing certainly requires you to answer our letters.

Of course we realize that it is entirely possible that you have neither received or read our previous letters personally. In view of all the facts we shall expect to hear from you at once.

Yours very truly,
CREDITOR & CO.

POSTAL CARD FORM.

We wrote you ——, ——, ——, ——, and ——. No reply. Why? It is important that we hear from you at once.

CREDITOR & CO.

Send the letters at intervals of a week and cards every other day for twenty days, following letter No. 5, allowing three days for answer to last letter. Fill in the blank spaces in second line of card form with the dates of the five preceding letters as, 1/1, 1/7, 1/14, 1/21, and 1/28, thus making a solid second line of dates, *in figures*. Add nothing to the wording of card form and do not date, but write signature with pen down toward the right-hand corner of card. The letters should be single spaced with double space between paragraphs.

It will be noted that the first three letters are very short, indeed, and yet they say all that is necessary or advisable to say at this stage of the correspondence, and, also ask a question that demands an answer whether the debtor is able to pay just at that time or not. They are so mild that they may be sent, without giving offense, to perfectly good, but slow debtors, and yet they form an effective basis for the letters that follow to the slower and more doubtful debtors.

The fourth letter takes the place of the usual "threat to sue" letter, and is fully as effective. Without committing the writer to any definite action whatever, it leaves the matter open so that he can effectively continue his mail campaign. The fifth letter is a reversal of the threat to "list" or to let other business men know of the indebtedness, and is also more effective without being offensive. It flatters instead of threatens, and it winds up by giving the debtor an excuse for

his past failures to respond to the letters that have been sent him.

But some men do not read letters and it does not much matter what you write them. Here is where the cards come in. While they say nothing whatever about an account, and are consequently perfectly legal, yet they furnish an inexpensive form of persistency that certainly does get results.

In conclusion, let it be emphatically stated that this system will not get money from a man who has none, or secure any other impossible result, but it will bring in the most money possible out of the past due accounts, if used according to instructions, and it will not involve the user in unnecessary expense or useless litigation.

In an article on handling slow collections by mail, published in a recent issue, the writer explained an efficient and inexpensive method of renewing the interest of "Mr. Slow Pay" in the fact of his indebtedness and of placing him in the right mental attitude to facilitate a satisfactory adjustment of his unpaid account. But when Mr. Slow Pay answers one of the letters the work of collection is only commenced unless he settles in full at the time. In practice it will be found that he will often pay an installment of the indebtedness, promising to pay the balance at a future date, or will attempt to settle the entire account in promises instead of cash. In either of these cases the right kind of collection diplomacy is needed to complete the work already accomplished in turning a poor account into a good one.

In order to intelligently decide on a plan of action in any given case, it is well to remember that there are just four general classes of slow debtors, and that your particular slow debtor must be first properly classified before the right method of handling him can be judged. We will consider the first class as consisting of those who were abundantly able to pay at the time of contracting the indebtedness but have since met with reverses and through no fault of their own are unable to fulfill their obligations. The second class takes in those whom we may call the "happy-go-lucky" variety, who contract obligations without at all considering their ability to meet them and who, of course, were not entitled to the credit extended them. The fourth class contains the deliberate dead beats who may or may not have means to pay, but who are "law proof," and do not intend to pay any account that can be avoided.

When a debtor of the first class—one who has met with reverses and is really unable to pay—tells his story of hard luck, it is easily possible for the creditor to take one of two positions, either one of which is wrong. On the one hand he may feel he had nothing to do with bringing about his debtor's ill luck, and that it is nothing to him—that the debtor should sell what he has or borrow the money—but that no matter how he has to get it his account must be paid, and at once. On the other hand, if the creditor is of a kindly, easy going disposition he may simply bid Mr. Debtor take his time and pay when he gets ready. Both of these attitudes are wrong.

The correct method is to express regret for his misfortunes and by adroit questioning ascertain as closely as possible the exact situation and his probable future ability to take care of the account, and accept his promises for the future only to the extent that they seem possible of fulfillment. For example, it would be exceedingly unwise to accept a six months' note for \$200 where the debtor will receive his income in small, occasional amounts and would be required to save up the amount to meet the note. This is too much to expect of average human nature, even with the best of intentions. The result might quite probably be a payment of \$10 or \$20, and a request for another six months' extension. In this case the better plan would be to ask for ten notes of \$20 each, payable monthly, commencing, say, sixty days from date with a proviso in each note that it should immediately become due in case of failure to pay any prior note. This offer shows a willingness to help the debtor on his feet by giving him all the time he needs and therefore creates good will and a disposition to exert every effort to meet the small amounts as they come due, where a demand for immediate payment that is impossible to comply with or an acceptance of a promise to pay as soon as able, both tend to cause indifference to pay-

ment that is likely to mean the carrying of the account on the books for an indefinite time.

It is, of course, important that the debtor be notified of all installments as they come due, and his interest in settling the account be kept up to the same pitch as when the installment arrangement was made. Where the debtor owes a number of accounts at the time of meeting with misfortune it is clear that the creditor using helpful but energetic methods in handling the case will be the first one to receive his money, as well as to keep the debtor's good will which means future business and profit. This method should also be applied to debtors of the third class—those who contract obligations without assuring themselves of the means to pay them—with the difference that less time should be given them than if there was a real reason for asking delay outside of bad management. Small weekly, instead of monthly, notes are often effective in this class of cases. But, of course, the underlying principle is that the promise must accord with the ability to pay, as far as this may be determined.

The second and fourth classes of debtors—those who habitually delay payment, though solvent, and the dead beats who have no intention of paying at all—are the hardest to handle because in neither case do they make promises in good faith and, of course, their promises can not be relied on. An experience of the writer while credit man for a casket manufacturer will serve to illustrate the usual reason for slow payment by one well able to pay. A certain highly rated undertaker was way behind in his accounts and paid no attention to monthly statements or the ordinary letters calling his attention to the matter. Therefore, regardless of his high rating, he was put upon the "high pressure" mailing list—cards sent every other day—which finally induced an answer. His excuse was that he was putting his ready money in some new buildings, hearses, etc., and could not conveniently take care of the account. In other words, he was using the casket manufacturer's money for his own business expansion! Diplomatic correspondence failing to change his views, he was given the alternative of paying in full at once or being sued. He paid and his account went to some other manufacturer, but the point the writer is making is that no business house can afford to carry this class of accounts on any terms, and that the only way to handle cases of this kind is either to promptly reform their habit of using their creditor's money regardless of terms, or to insist on settlement in full and let some one else have the doubtful benefit of their trade.

The dead beats are the hardest to handle of all as their promises are absolutely worthless and compelling payment by law is usually impossible. As a general rule, the best results are obtained by refusing to accept promises to pay in the future for longer than a week or ten days and on each failure to keep a promise, again resorting to "high pressure" mail, in some form of notice every other day—the very persistency of which may get on the debtor's nerves so that he will pay the account in order to avoid the constant annoyance. In the writer's experience this method got the money from a notorious dead beat who owed almost every one in the trade and who had paid no attention to this particular account for several years, although all the usual methods had been tried from time to time—but persistent "high pressure" mail brought a settlement in full in about three months—and best of all, at a cost of not more than a couple of dollars.

This is the third of a series of four articles on the subject of collection and credit efficiency. The first two, which appeared in recent issues, indicated a practical and inexpensive method of taking care of slow accounts by mail, and the diplomacy necessary in handling the various classes of slow debtors. This article deals with a different, but fully as important part of the work of the collection department—the keeping of all collection records in such simple yet systematic form as will make for regular and prompt attention to the slow accounts with the least effort on the part of this department.

It is so undoubtedly true that many slow accounts are actually lost through inattention due in large part to cumbersome records that it is not necessary to dwell on this fact. The experience of every collection manager will verify this, but

while some have profited by the knowledge, many have felt that a thoroughly efficient system was too expensive for them to adopt, both in first cost and the expense of upkeep. This belief, however, is far from the fact. It is the lack of such a system that is truly expensive. Even an energetic collection manager is apt to neglect giving his slow accounts the proper attention if it is necessary to go through the ledger to ascertain the exact status of each one, and even in a small business memory is a very uncertain substitute for handy records.

If Mr. Debtor's account is overdue this should automatically come to the attention of the manager at brief and regular intervals. Also, if Mr. Debtor promises a payment at a certain date the promise should be remembered at the right time. Experience has proven that no ledger system, either old-style, loose-leaf or card, will produce these results except at a time cost so great that few men can spare it. The right method is to keep a separate card record of all accounts that are past due, and to keep this record partially in duplicate. That is, there should be an alphabetical card record, giving all the ledger data as well as notations of promises to pay in the future, and there should also be a chronological card record which will call the attention of the collection manager to each of these accounts at the right time.

At first thought it might seem that such a system would be still more cumbersome as well as too expensive, but this idea is based on the supposed necessity of installing regular card filing cases, ordering specially printed cards, and overlooking the slight amount of time actually required to keep up such a record, as well as the time saved in having the data wanted in handy form to get at. While a regular filing equipment, including specially printed and ruled cards, is a fine thing to have, yet it is quite possible to get the same results with a couple of cigar boxes and cards cut from odd stock that can be found at any printer's. It is thus possible for the smallest business to make use of the most efficient business methods without the usual cost.

The important point is to have the method of keeping the records as nearly automatic as possible. When the monthly statements are sent out each overdue account should be entered on the duplicate card system mentioned. The accompanying form of entry will be found very convenient.

MR. SLOW DEBTOR Chicago, Ill.						
Charges			Payments			
1/1	\$160	80	2/5 Promised balance 2/20			
1/7	240	30				
			1/5	\$100	00	
			1/15	50	00	

This card shows at a glance a past due balance of \$251.10, and a promise to pay February 20. It is a handy record to refer to in case more credit is requested before settlement is made, and no printed card or special ruling is required to carry out the idea.

At the same time this card is made out another one should be filed in the chronological file to come up February 20 with simply the name of the debtor on it, so that attention will be called to this account at exactly the right time. In the case of past due accounts where no promise has been made the card should come up weekly until some definite arrangement has been secured. Where a filing clerk is employed it should be his duty to bring these cards to the collection manager daily with the morning mail.

In the absence of a regular filing clerk it should be made a matter of the first importance for the collection manager himself to take up the cards daily as well as to attend personally to the making of the proper notations and the proper filing. The time required is so little that it is merely a question of getting into the habit. There is another way of handling that some managers prefer when taking personal charge of the collection files, and this is known as the signal system. Various colored clips are utilized, each color representing a different day in the week. Where this system is used a chronological file is not required, as the clips are placed on the cards in the alphabetical file with a different colored clip to

indicate the particular week in the month that the day clip refers to. This method does not appeal to the writer as being nearly as simple and effective as the chronological file, but it is certainly better than making no effort at all to bring accounts up for attention at the proper date.

In one large business house where the writer was at one time employed, the method of making the proper notations on the cards and keeping them up to date was as follows: When the mail came in it was opened by the office boy at a table next to the bookkeeper's desk. Any mail containing remittances was handed to the bookkeeper, who made the proper entry in the ledger and then sent the letters to the writer as credit man, who could then make the proper entries on the alphabetical card files, answer any part of the letter that pertained to my department, and pass them on to the sales manager. The mail not containing remittances followed the same route, except that it did not require the attention of the bookkeeper.

In this connection, there is another point worth at least passing attention, and that is that one of two rules should be made and rigidly adhered to. Either only the collection manager and filing clerk should be allowed access to the cards at all, or if others are allowed to look them over, they should not be allowed to take them out of the box. Many persons, especially the younger clerks, are often careless as to the proper return of filing cards to the files, and carelessness of this kind is liable at any time to prove exceedingly costly.

This is the fourth of a series of articles appearing in this publication on the subject of credit and collection efficiency. At first thought it might seem as if this article should have preceded the articles on collections, as a defective credit system is a prerequisite of slow collections. However, the majority of business men, on account of already having bad accounts on their books, are more readily interested in the subject of collections than in preventing a similar condition in the future. For this reason the logical order of publication was reversed, and the writer trusts that his suggestions on handling collections have already borne sufficient fruit to insure a careful study of the matter of credits.

Too often credits are granted indiscriminately, merely to acquire a greater volume of business, in the belief that while some losses will occur the profits of the increased business obtained will more than offset the losses, and that therefore a carefully worked out plan of extending credits is unnecessary. The records of failures reported through the mercantile agencies daily prove the falsity of this theory. "There is a reason" should be the basis of every credit granted, and the conditions on which credit will be granted should be decided on in advance, and not deviated from. Intuition and guesswork are exceedingly unsafe guides.

Generally speaking, all credits should be based on knowledge of the character, habit of pay and financial responsibility of the applicant. The moral hazard is the greatest in the average mercantile transaction, and it therefore follows that character should be given the first consideration. A reputation for prompt settlement of obligations, combined with an otherwise reputable record, would form a safer basis for moderate credit than the ownership of property and a questionable reputation. In fact, it is a serious error to base the granting of credit on evidence of financial responsibility alone.

The next requirement of an efficient credit system is an adequate plan for securing accurate information regarding the applicant. This is usually done through either mercantile agencies, banks, merchants' associations, or direct reference to other merchants with whom the applicant has done business. And that little word "either" explains where much of the trouble comes in. Merchants' associations are growing so fast that more and more merchants are coming daily to rely on them entirely for credit information. This is a great mistake, even in the smaller communities. The mere fact that the applicant for credit has a favorable rating on some mercantile agency's or association's records should not mean that no other steps should be taken to obtain further information. It is, of course, a reasonably safe basis for the granting of a moderate credit in the first instance, where time for further investigation is lacking, but as soon as possible all other sources of information should be drawn on.

THE DAWN OF A NEW PURE FOOD NAME



SUCCESSOR TO SULZBERGER & SONS CO.

A personal statement by Thomas E. Wilson

THE American public has known Sulzberger & Sons for over half a century. You know the quality of their meats and meat food products—you know the high standard maintained by Majestic Hams and Bacon, for example.

When the opportunity came to associate myself with Sulzberger & Sons Co., I saw a big, growing, successful institution, with large plants located in the right sections, with splendid possibilities to be made bigger and better and broader.

I knew the organization. I knew its men. I knew them to be men of big ideas—"live wires", eager and anxious for wider opportunities.

"S & S" built their business on their high quality standard. They were just as jealous of their good name as we are of that of Wilson & Co.

The advance in civilization creates new standards, no greater advances have been made than those in the preparation of foods and we, with our enlarged Company and increased capital, with our keen, live, enthusiastic force, will meet these demands and not only maintain the high standards of the old Company, but will put these standards even higher.

Already we see the results of the new organization. Increasing sales, heavier demands for "Majestic" products, tell the story.

We are going to co-operate with the stock-raiser; we are going to encourage stock raising in every agricultural district. We want the supply of live stock increased. With our wide facilities we should be able to bring about conditions which will lower the price of meats to you.

We believe that all meats and meat food products you are asked to buy should be handled with *respect*. That is why, in addition to the safeguard of United States government inspection, we insist upon rigid cleanliness and sanitary conditions in every one of our plants.

We want you to know and to believe that the name "Wilson & Co." is actually a pure food name. It is a guarantee of purity, cleanliness and quality.

So here is the splendid old "S & S" institution—after more than half a century of successful growth—built into a bigger, better and broader organization.

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Distributing Branches in all Leading Cities of the United States and Foreign Countries

NOTE—For a short time we will continue to use the "S & S" label—it means all that it always meant, with the added strength of the new organization of Wilson & Co.



"Just say Wilson's—

it's the pure food name."

DRIED-FRUIT INDUSTRY OF AUSTRALIA.

The cultivation of vines in Australia for the production of dried currants, sultanas, and raisins has in recent years gained a position of considerable importance as a revenue-earning industry. While the output of these dried fruits in the season 1908-9 was only 15,164,000 pounds, it has steadily expanded from year to year, and for the season 1913-14 was more than double that amount, or 30,662,000 pounds, New South Wales contributing 546,000 pounds to this total; Victoria, 20,429,000 pounds; South Australia, 9,488,000 pounds; and Western Australia, 199,000 pounds. That this quantity is more than sufficient to supply the home demand is shown by the fact that nearly 2,400,000 pounds, valued at \$147,400, were exported to the United Kingdom and British dominions, while only 270,000 pounds were imported from Greece, Asia Minor, and Spain.

Experience has shown that the dry lands situated along the Murray River, in regions of intense heat and of no rain during the summer months, are marvelously suited for viticulture when subjected to irrigation. The irrigation settlements already established—having after various vicissitudes proven a commercial success—are increasing their area under cultivation, and new tracts will be opened up for fruit growing with the completion of the large irrigation works on the Murrumbidgee in New South Wales. With the consequent increased production, Australia may be expected to enter the world's markets as a seller of dried fruits, and should unsettled conditions continue to restrict the activities of the Mediterranean countries, its debut as an exporter of this class of produce should prove successful. American importers of dried currants and sultanas (small, white, seedless raisins) from Greece and of table raisins from Spain may find it advantageous to consider Australia as an alternate source of supply.

It is to be noted that two-thirds of the total production is credited to Victoria and practically all of the balance to South Australia, the centers of cultivation being the irrigation settlements of Mildura and Renmark in the respective States. These settlements were founded at about the same time and under the same auspices. They have progressed, generally speaking, along similar lines and present interesting examples of the development of private enterprises into what is now practically a co-operative industry and incidentally a trust or close combination regulating the distribution, price, and sale not only of their own product but of the output of other dried-fruit producers throughout Australia. In order to understand how this has come about it is necessary to sketch the peculiar history of Mildura, the original and more important of the settlements.

Mildura is situated on the Murray River, in the northwestern corner of the State of Victoria, 351 miles by rail from Melbourne. The irrigation settlement embraces an area of 45,000 acres, and adjoining it is the Merbein settlement of 5,600 acres, opened in 1909 and controlled by the State Rivers and Water Supply Commission of the Victorian Government. This section of the country was occupied as a cattle run as early as 1845, but after the pest of rabbits appeared it lost its value for the purpose and passed into the hands of liquidators. At about the same time (1884) the attention of the Government was aroused by the serious droughts that threatened the existence of the agricultural settlers in this section of the country to the necessity of water conservation and irrigation to protect their interests, and Mr. Alfred Deakin, then Minister of Public Works and Water Supply, was appointed to visit the United States and Canada to study different systems employed there. As the result of this visit two brothers (George and W. B. Chaffey), who had had considerable experience in the promotion of irrigation settlements in California and Ontario for fruit culture, came to Australia, and, after an examination of the country along the northwestern boundary of Victoria, finally selected Mildura as most suitable from its topography, character of soil, and river-water supply for the establishment of a colony.

Their proposal was eventually accepted by the Government, and an agreement was entered into in May, 1887, whereby a free grant of 50,000 acres near the river was conceded, subject to an expenditure for works of £5 (\$24.33) per

acre, and the further right was given to purchase 200,000 acres adjoining at £1 (\$4.87) per acre and the expenditure for works of an additional £1 per acre. The Chaffey Bros. (Ltd.) Co. was formed and took over these grants and rights. At about the same time a similar grant for a like amount of land at Renmark was obtained from the South Australian Government. By means of extensive advertising in England and on the Continent settlers were induced to take up the lands, the sales of which progressed rapidly in the first few years, so that in a short time the company was able to acquire title to the first 50,000 acres and some 12,000 acres of the outlying 200,000 acres.

The promoters, however, from the very outset appear to have depended upon the land sales to finance the scheme and put the plant in operation. The price set down for the land was in most instances £20 (\$97.33) per acre, the purchaser paying a deposit of £1 per acre, and the final payment being spread over a period of 10 years, with interest at the rate of 5 per cent upon the unpaid balance. Upon the payment of the deposit a certificate of title was issued to the settler as if he were the owner in fee simple, and mortgages accepted for the balance due. These mortgages were rehypothecated at nearly their face value with the banks and the proceeds used to finance the works and thus fulfill the conditions to acquire the lands under the Government grant and to promote further land sales. Further sums of money were borrowed in London by the sale of debentures for some £200,000 (\$973,300), secured by the land assets thus acquired, stated in the advertisements to represent £854,000 (\$4,155,990) value, against which were liabilities of £215,000 (\$1,046,300).

The Chaffey Co. collapsed after eight years of existence and the settlers at Mildura were left in a precarious position, although experience had shown that from an agricultural point of view the colony possessed the elements of success. In order to protect the settlers and reconcile the various financial interests a Royal Commission investigated the situation in 1896, and in accordance with its recommendations a special act of Parliament was passed reorganizing the settlement.

The concession of 1887 was canceled and all the lands for which title had not been acquired reverted to the Crown. The debenture holders were adjudged by the Supreme Court to be the owners of all the unpledged assets of the company, and consequently of the unsold land for which title had been acquired. The First Mildura Irrigation Trust was created, composed of six commissioners elected by the settlers and the other interests, to administer the irrigation works, collect the water rates, etc. At the same time water rights were limited to the lands already occupied by settlers. This provision leaves large blocks of land scattered throughout the settlement in the hands of the debenture holders and practically worthless because of inability to secure water. Arrangements, however, have recently been made that 4,000 acres of this land will be given water rights upon payment of the sum of £8 (38.93) per acre cash down, and as the colony consolidates and the irrigation plant expands it is probable that additional areas will be extended the privilege, thus greatly increasing the area under cultivation and the productive power of the settlement.

Furthermore, the Government loaned the trust about £100,000 (\$486,650) for the purpose of placing the irrigation plant in a higher degree of efficiency. The service of the loan and its repayment, as well as the cost of maintenance and administration of the system, are a charge upon the revenue from the water rates, which at the present time are from 30 to 40 shillings (\$7.30 to \$9.73) per acre per annum.

The total area now under the control of the trust is 45,000 acres, of which 15,000 are irrigated and 13,000 actually under crop. The number of individual growers is 600, while the total population is about 7,000. It is estimated that the present year's yield of dried fruits will be 13,000 tons (of 2,240 pounds), valued at \$2,500,000, or nearly \$200 per acre. A recent visit to the settlement showed the vines were heavily laden with fruit, many of the vignerons calculating that they would harvest 2 and, in some instances, 3 tons per acre. As a money-making proposition vine culture in Mildura can hardly be surpassed.

The general scheme of irrigation differs from that usually

WHY SACCHARIN WON

The Long, Contested Suit of the Monsanto Chemical Works of Saint Louis, Manufacturers of Saccharin, Is Finally Decided in Its Favor.

The Supreme Court of the State of Missouri in handing down its *unanimous* decision that Saccharin is not deleterious to health, and declaring null and void the statute prohibiting its use recognized the principle that the amount used must be considered. This, the Supreme Court of the United States also did in its decision in the famous Bleached Flour case.

An excessive use of anything is harmful, whether it be sugar, salt or water.

SACCHARIN is much more desirable than sugar as a sweetening agent for soft drinks from any view point: (First)—Healthfulness; (Second)—Economy.

In using SACCHARIN the danger from the use of sugar is eliminated, and the infinitesimal amount of SACCHARIN that is required to sweeten cannot possibly be harmful to any one, either adults or children.

Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

Use SACCHARIN to sweeten and do not hesitate to declare its use on the label. **Such declaration stamps your goods as being healthful.**

MONSANTO CHEMICAL WORKS

Manufacturers of Saccharin

ST. LOUIS

Branch: Platt and Pearl Streets, New York

employed in the United States, as the configuration of the land does not permit the water to be impounded at an elevation and distributed by gravitation. It must be lifted from the river by pumps to distributing channels at different levels. From these main channels it flows into lateral spurs and head ditches, which release it over the lands in surface furrows. These main concreted channels are about 170 miles in length, and the total system of channels, spurs and ditches comprises some 300 miles. The water is first pumped from the river for conservation into a valley 2 miles long, part of the old river bed, known in the aboriginal tongue as a "billabong," thus forming an artificial lake. From the billabong it is lifted to the main channel on the 50-foot level, and thence a portion of the water is pumped successively to the channels on the 70-foot, 85-foot and 90-foot levels. The collective power of all the pumps is 5,200 horsepower, and the volume pumped is equivalent to 7,692,960 Imperial gallons (9,233,860 U. S. gallons) per hour. At the present time the pumps have been working continuously for 60 days of 24 hours. Three irrigations are provided per annum in July, November and December-January.

The fruit is picked in February, the harvesting occupying three to four weeks. All of it is sun-dried at the individual vineyards, the climate at Mildura being admirably suited for this method of curing. During the summer months no rain falls and the temperature ranges from 100° to 115°. The picked fruit is first dipped in a weak solution of caustic soda, which softens the skin to facilitate the drying and also prevents the sultanas from acquiring a dark color. It is then placed on racks of wire netting in the open air and allowed to sweat and dry for about two weeks. Only the fine table raisins are not dipped and are dried quickly in three or four days.

Once the fruit has been picked and dried, the responsibility of the Mildura grower is at an end, as under the arrangements in vogue he is relieved of the trouble of packing and marketing his fruit. The present system grew out of the necessities of the case. Competition among the individual growers had so reduced the margin of profit that the industry was threatened with ruin. Consequently the promoters of the colony organized the Australian Dried Fruits Association, a beneficent trust without capital, conducted by and for the benefit of the dried-fruit producers. The association has eventually assumed such proportions that it embraces practically all the growers of Australia, who are bound by their membership agreement and under bond to market their fruit only through the association and its agents. The expenses of the organization are provided for by a tax of about 5 shillings (\$1.22) per ton on the fruit consigned to it. Its headquarters are at Melbourne and it has branches in all the principal cities of the Commonwealth.

As early as possible in the season the association estimates the amount of the available supplies and also endeavors to ascertain from the merchants what are likely to be the year's requirements. It then determines what portion of the year's crop shall be placed upon the home market and how much shall be sold for export or sent to the distilleries to be converted into high spirits for fortifying wines. All its sales are made through wholesale distributing houses which are appointed agents of the association, and for their services are paid a commission on the price fixed by the association. These agents agree to sell only to such wholesale buyers as have subscribed to the rules and regulations of the association and agreed to resell only at the prices fixed by the association.

The prices, decided upon at the beginning of the season and furnished to the merchants, together with copies of the rules and regulations, cover all varieties and grades of fruit and are classified for 10-ton lots, lots of 100 boxes and for a single box (56 pounds). The first-hand buyers also agree to sell to the purchasers at second hand, with the condition attached that these shall sell only at the prices fixed by the association. Syndicating of purchases is not permitted. Thus the price is absolutely fixed until the small retailer is reached, who may sell a few pounds to the housewife at as high a price as he can get.

GROWERS' POOL RESULTS.

Provision is made that agents and buyers who purchase

fruit from others than agents must resell at the association prices and pay into the association's equalization fund a sum equal to 10 per cent on the association 10-ton price. Certain deferred discounts are allowed to such buyers as have observed the prices and conditions of the association, and deteriorated carried-over fruit may be exchanged for new. It is estimated that fully 95 per cent of the dried fruit produced in Australia is marketed through the Australian Dried Fruits Association under these conditions.

The link between the association and Mildura growers is the co-operative or the privately owned packing company, of which there are several in operation. The grower takes his cured fruit to the packing company, where it is graded according to the standards of the association, and a certificate of weight is issued which serves as a receipt. All the fruit received is bulked by grades, cleaned and stemmed, packed in uniform cases of 56 pounds bearing the brand of the packing company and consigned to the Dried Fruits Association to be sold. At the end of the season the proceeds are distributed pro rata among the growers through the medium of the packing companies. As a rule the grower may receive an advance of £10 (\$48.67) per ton at the time of delivering his fruit to the packer, and further advances from time to time as the season progresses.

This general system of distribution and price control, protected by a tariff of 3d (about 6 cents) per pound on imported dried fruits, has proven highly satisfactory to the grower and merchant. The general consumer, however, is inclined to believe that it has increased the cost to him.

The association does not issue a fixed price for export, but nevertheless controls the price at which fruit may be sold overseas by the agents. The chairman of the committee of the association testified before the Interstate Commerce Commission that for London sales they are governed by the world market, while for Canada, New Zealand and South Africa a price is fixed below which the fruit must not be sold. The prices obtained for export have in past years been substantially lower than those for the home market.

The scarcity of supplies in Europe this season, however, has injected a new element into the situation. Sultanas, which in normal times have ranged from £30 to £40 (\$146 to \$194.65) per ton, have sold at £110 (\$535.30) on the London market, and currants as high as £50 (\$243.30), as compared with £23 (\$111.90) on an average. Under these circumstances the temptation would be strong to export as much of the product as possible and thus deplete the home market or force prices to a point that would greatly restrict the consumption. Pursuing its policy of checking the rise of prices of food products to the home consumer, the Government has accordingly prohibited the export of dried fruits except with the consent of the Minister of Trade and Customs.

The irrigation settlement of Merbein, adjoining Mildura, which was established by the Rivers and Water Supply Commission of Victoria about six years ago, as previously mentioned, is now reaching its full production. This settlement comprises 5,600 acres of Crown lands, placed under irrigation by the Government under a system similar to that of Mildura, and offered to settlers at £5 (\$24.33) per acre, in payments extending over 31½ years. Settlers, whose applications for allotments must be approved by the Government, are obliged to reside upon the property. The water rates are 37s 6d (\$9.13) per acre per annum. All of the land has now been taken up, the number of holdings being 200. The methods of handling and marketing the crop are the same as those at Mildura. It is to be remarked that Merbein has profited by the experience of Mildura and devoted practically the entire area to vines.

The Mildura settlement was originally planted, to a large extent, with peach, apricot and citrus trees, which produced excellent results for several years. The Australian river waters, however, are in seasons of drought strongly charged with sodium and other salts, which, accumulating in the soil after repeated irrigations, have seriously affected the vitality of the fruit trees and led the settlers to substitute vines which are not affected. The past season of drought having been particularly severe, the concentration of salts in the water was more pronounced than ever.

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BUY PURE COMPRESSED YEAST

The discussion about using starch in Compressed Yeast has reached the point in the United States of a decision forcing those who used it to declare the fact on the wrapper or label.

That is how we administer the Food Laws in this country.

In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

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CHICAGO, ILLINOIS



Washington D. C. News Letter



WASHINGTON, July 27.—Announcement may be made in a short time that government chemists have found a way in which Americans can make benzoate of soda and other chemicals needed by American manufacturers of foods, drugs, paper and other things at so small a cost that they will be able to continue in business even if congress does fail, as now seems probable, to make the rates high enough to keep the Germans out of the market, or, if they come in, have the cost of their coming so high that American capital invested in chemical manufacture will be adequately protected. The chemists have been at work for more than a year trying to find a way for rendering Americans independent of Germany, without resort by the Democrats in control of the government, to the protective tariff principle.

As before indicated they believe they are certain benzoate of soda can be produced by Americans so as to make themselves independent. But as a business proposition, they are not sure an American could maintain himself in the market if his only product were benzoate. Under present conditions, of course, with benzoate at \$8 per pound instead of forty cents, the normal price, no such question would arise.

The rule of cum grano salis, or perhaps a more modern rendition, with a drop of benzoate, will be a good thing to remember if such an announcement is made. Government chemists have a way of making experiments and reporting that they accomplished a given result by the expenditure of so much money. They never think it necessary to figure into the overhead cost of the supervision represented by the salaries of the president, the cabinet officers, congress and the host of other officials of which the man who is doing the figuring is but an infinitesimal atom.

A reason for remembering that rule is to be found in the fact that only a short time ago the chief petroleum technologist of the Bureau of Mines returned from an inspection of plants in which the Burton process for increasing the amount of gasoline distilled from a given quantity of oil is used and reported that that process, in use for six or eight years, gives better results than the Rittman process. The significance of that lies in the fact that the Rittman process is the one which Secretary Lane announced a year or more ago as the one that would revolutionize the production of gasoline and give non-Standard refiners an opportunity to compete on terms of equality with the Standard whenever the price of gasoline should go to such a figure as to make it worth while to crack open the molecules of crude petroleum and extract gasoline the ordinary process of distillation will not yield. That process was to give the United States gasoline at a price seldom more than twelve cents, even in times of greatest scarcity.

Rittman's process is all right, provided no other can be had, but under like circumstances and conditions the process controlled by the Standard is the better. That is why it will be advisable to remember the pinch of salt rule in estimating the worth of whatever announcement may be made by or in behalf of the government chemists. They do not intend to deceive, but just at this time it will be helpful to the administration if it can persuade the public it has done something toward making American manufacturers independent of the Germans, even if Americans are not inclined to establish a carefully integrated chemical industry but are interested only in getting benzoate of soda and a few other chemicals.

Another announcement that may reasonably be expected to come forth, in one form or another, in fact it has come but not very strong, is that the packers are feeding the soldiers with embalmed beef, that the fruit and vegetable canners are working off their oldest stock and so forth on the brave defenders of the land. Reports of "rotten" canned beef have already produced investigation resolutions. Congress being the most irresponsible body on the face of the earth, may adopt a resolution at any time, directing one of its commit-

tees to investigate. Adopting a resolution ordering an investigation means to the minds of many persons that the truth of assertions made in the preamble of a resolution has already been established, just as the fact that a man may be indicted for perjury, burglary or murder, seems to establish the truth of the charge in the minds of persons of mental caliber of those who take the embalmed beef charges seriously.

The only fact brought forth thus far is that some of the corner beef was put into the cans five or six years ago, as shown by the date thereon. Men and women who have eaten jam their mothers made years ago and kept for eight or ten years seems to believe that corned beef, kept in an air tight and light proof tin can for five or six years, is ipso facto rotten. The fact of the matter is nobody knows how many thousands of years meat or any other food may be kept in a can of that kind without losing a bit of its food value, because exclusion of light and air make it impossible for the germs of putrefaction to work. Exclusion of light and air, as by freezing and burying in the mud it has been demonstrated, preserves meat for untold centuries. The meat of mastodons which lived before man came upon the earth has been found absolutely sound and wholesome, frozen and buried in northern Russia. The freezing and burying kept the putrefactive germs out and unless there is an opportunity for them to work, there can be no deterioration, as that word is used in connection with food.

The live stock men appeared before the House judiciary committee on July 6 urging the adoption of the Borland resolution directing the Federal Trade Commission to investigate the packers on the theory that they have been paying the growers of live stock too little for the animals they slaughter and charging the users of meat too much.

But they came not because they wanted to but because, at the prior hearing in April, they had used up all the time the committee could allow, without giving the packers any opportunity to traverse the allegations they had made, nearly every one of which have been excluded by a court of law as irrelevant, immaterial, or hearsay. Arthur Meeker of Armour & Co. was the chief witness. Public accountants were put on the stand to show the processes used in arriving at cost figures placed in evidence by Mr. Meeker.

According to Mr. Meeker, Armour & Co. in 1915 made on an average \$1.31 on every beef animal slaughtered. Swift & Co. made 26 cents per 100 pounds of meat sold. He suggested that inasmuch as the packers had shown their profits, the committee require the five or six most successful live stock men to show the public what profit they took out of the public, the live stock men having charged that the share of the packers was too large. The committee, of course, will do nothing of the kind. Congress and congressmen always assume that anything the farmer or cattle raiser may do is perfectly proper and righteous.

The packers opposed the resolution because, as they asserted, the live stock men have shown no reason why there shall be another investigation, the cost of which would necessarily have to be borne by the consumers of meat. He called attention to the fact that every time the packers have been brought into court, where everybody was made to swear to what he said and to say only those things he knew, the jury has had to acquit the packers. It is only when congress opens the doors and invites the high lung-power citizens to come forth that the packers get the worst of it, possibly because no one is bound to keep within the limits of truth. Anything "goes" before a congressional committee. There is no jury to pass upon the credibility of witnesses and no judge to keep a witness to a relation of things of which he has personal knowledge.

The most amazing part of the whole matter was that the day before the committee resumed its sittings, the Galloway committee appointed nearly two years ago by Secretary Hous-

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Don't use more Borax than recommended above.

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ton to study the cattle and meat market reported that while the number of meat animals has been steadily increasing the price of animals paid to the grower of meat food animals has been advancing. In other words, the packers have not been pinching the live stock men who have been hiring Walter L. Fisher to make that assertion in quarters where it would be repeated, notwithstanding facts to the contrary and sworn denials to the accuracy of his utterances.

The general character of the campaign Fisher has been conducting may be inferred from just one incident that took place at the hearing. Fisher, with utmost fervor, called on the congressmen who are members of the committee to have congress do something to deprive the advantage the packers now have by reason of their ownership of refrigerator cars, by compelling the railroads to furnish such equipment so that anybody may become a packer.

Fisher batted his eyes a little, but only a little, when he found attorneys for the packers heartily applauding his fervent appeal to have the railroads furnish such cars.

The explanation for that applause is that for years the packers have been trying to get the Interstate Commerce Commission to make such a requirement, but they have had no success. Two years ago this summer the Commission obtained figures showing that the luckiest packer in the whole bunch makes less than two per cent a year on the money he has invested in refrigerator cars. They all want to get out of the business of owning cars, but the railroads will not let them. The railroads know that they cannot operate cars of that kind for as little as they pay the packers to furnish equipment of that kind. Fisher did not know the fact, else he would not have said anything about the so-called private cars of the packers.

HEISS.

STATES ITS PRINCIPLES.

The California Olive Association, with headquarters in Los Angeles and comprising eight or ten of the leading

packers of ripe olives, has issued a "declaration of principles" or something of that sort, in which the aims of the organization are set forth in detail as follows:

1. An educational campaign in publications of local and national circulation to have for its object the demonstration of the merits of ripe olives, their food value, and general healthful qualities.

2. A campaign of demonstration, through tested and approved commercial channels, calculated to reach the buying public.

3. A thorough standardization of quality, color, size, trade names and packages to the end that all purchasers from the jobber to ultimate consumer may know from the label the exact contents of the package.

4. The absolute elimination of the packing of anything but ripe olives, to be sold as such.

We, as members of the association, desire to further state that our organization has no control over or share in the fixing of the prices to be paid to the grower for fruit, nor with the prices to be charged the purchaser for processed olives. This is in the hands of the individual members. They may pay whatever they elect to pay to the growers and charge what they please to the consumer.

The association was formed, to sum up concretely, for these purposes, to which we will all adhere:

1. To widen the market for ripe olives.

2. To insure the packing and marketing of high grade, matured fruit.

3. To standardize quality, size and color of the olives and style of package.

4. To promote the olive industry in every possible way and to represent the olive packers in any movement looking thereto and lend all assistance possible to the olive grower.

—if pure food, why not,—clean food

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A pamphlet showing how we have co-operated with Food and Drug officials and Clean Food Clubs in making educative displays will be sent without charge if you mention this paper.



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AN IMPORTANT ANNOUNCEMENT

TO THE JOBBER AND RETAILER



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Plans are already laid to place Waw Waw in its deserved position as the King of Table Sauces.

We cannot make Waw Waw Sauce itself any better but we can and will make Waw Waw Sauce a better seller.

An extensive advertising campaign in the leading Journals is now in course of preparation. No pains, expense or effort will be spared to make Waw Waw a leader in easy, steady selling, just as it is now a leader in quality.

Full details of the new plans will be mailed to jobbers and retailers throughout the country. In the meantime the already increasing inflows of orders are being filled promptly from our New York warehouse.

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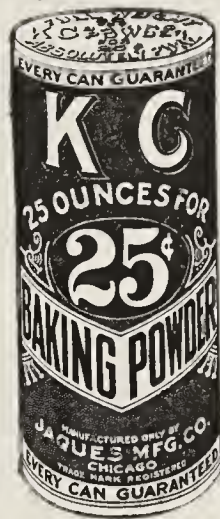
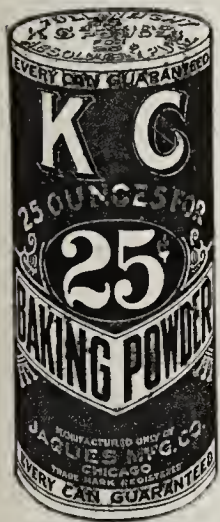
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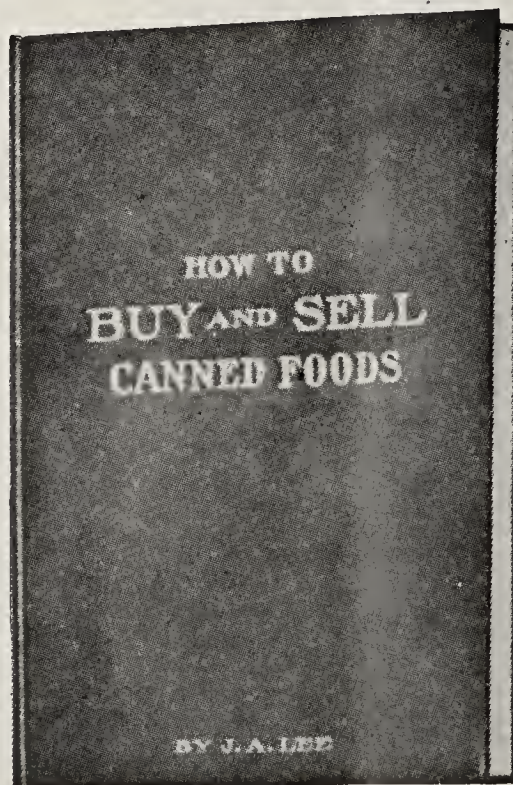
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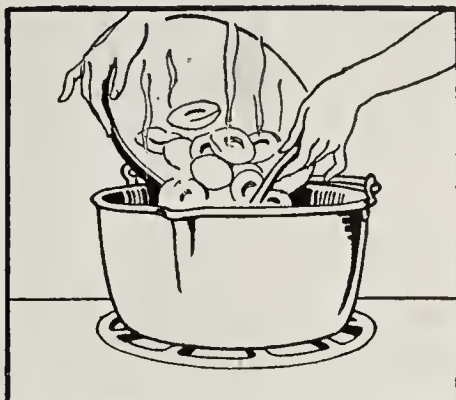
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Vol. XI.

SEPTEMBER, 1916.

Number 9.

Twentieth Annual Convention

A STENOGRAPHIC report of the Twentieth Annual Convention of the Association of American Dairy, Food and Drug Officials is given in this issue of The American Food Journal. Many matters of unusual interest came to light in the course of the four-day meeting and all those concerned in any way with this business of foods will do well to set aside a few hours to the reading of the report. Professor McCollum's address is pre-eminently worthy of close attention, while Miss Johnson's paper justly claims all praise. Dr. Barnard's lamentation of our inability to bring the truck farm to our back door was uproariously received. J. J. Farrell, the genial and kindly butter maker, blossomed out in all the glory of his beloved dandelion and made a genuine hit with the dairy contingent, so much so, in fact, that he was shoved into the presidency of the organization. We heartily congratulate the good man. He stands justly entitled to the honor. No more fitting tribute could have been paid him. He who is champion of a cause should likewise and properly be its hero.

Some irregularities occurred in the proceedings; but, of course, that is of minor consequence. For instance, Jones of Alabama was seated in the conven-

tion by the Committee on Credentials, and his ten-dollar membership fee collected. Shortly afterwards, President W. B. Barney saw fit to appoint him a member of the Auditing Committee. Later on, when Jones sought to defend his resolution asking for federal inspection of dairy products, he was declared by the same presiding officer, W. B. Barney, not to be entitled to the right of speech on the floor of the convention—was declared not to be a member of the association, on a committee of which his name still appeared by authority of the very man who was now ruling him out. It is peculiarly significant that the perennial anti-margarine resolution was this year denied the spotlight. No one knows where it was stopped. Perhaps it never left Harrisburg, Pa.

To the observer the 1916 convention developed the fact that the dairy barons are determined to protect their products at all hazards against federal inspection, compulsory pasteurization, or any manner of regulation which would result in commercial decency.

The American Food Journal has stood firmly for the federal regulation of this important industry and we see no reason to back-water now. In the entire life-time of this publication our editorial policy has never once been overruled by the court of last resort.

COVERED HAMS AND BACON UNDER THE LAW OF NET WEIGHT.

IT is reported that the Department of Agriculture is about to issue a ruling on the subject of marking of covered hams and covered bacon, under the Net Weight Amendment to the Pure Food law. Single hams and single sides of bacon are covered for sanitary reasons with paper, gelatine, or cloth, and when the ham or bacon is sold, the gross weight is used. Some months ago, when the question first arose, the Department of Agriculture decided that such covered hams and covered sides of bacon were not within the terms of the Net Weight law, and, consequently, were not required to be marked with the net weight. This ruling was objected to vigorously by the wholesale grocers, retail butchers, and others, and the silly cry was started that the packers were making millions of dollars each year through charging the consumers meat prices for paper, gelatine or cloth coverings. Finally, an appeal was made by these interests to the Department of Agriculture for a reconsideration and reversal of the ruling. In March of this year a hearing on the subject was held in Washington before the officials of the Department of Agriculture, but a decision has not been published. So far as the outcome may be judged from existing court decisions on the same subject, it is a fair guess that the Department will not change its ruling. Indeed, the government officials seemed to be convinced at the hearing that to require the net weight to be marked on covered hams and covered sides of bacon would work a positive injury upon the consumer who buys these articles by the whole piece, for the reason that after the correct net weight at the time of shipment was marked upon the ham or piece of bacon there would be a large shrinkage in weight, and the marked weight would not be correct at the time of sale to the ultimate consumer. Intermediate dealers would thus be able to pass on the marked weight instead of the actual weight. This would be at the expense of the consumer.

INTIMIDATION.

IN years past when the food laws were new, and the public was apathetic concerning their enforcement, it was the fashion of a few unscrupulous manufacturers of doctored and doped foods to endeavor to deter courageous pioneer food commissioners from the enforcement of the laws by filing personal damage suits against them. The food commissioner being an honest man was usually dependent upon his small salary for the support of his family, and the expense of defending the suit which had been trumped up against him was a strain upon his financial resources, and often entailed actual hardship upon his family. In some cases food commissioners were unable to stretch their purses to meet the cowardly attack and were compelled to stop their efforts to enforce the laws. Others better provided with funds, or more willing to stand the unjust expense, continued to fight and through the support of the newspapers of the country to win out in their fight against doped foods.

Of late years the practice of intimidating food officials by personal damage suits filed by those who were being prosecuted under the food laws has been discontinued.

It remained for the Calumet Baking Powder Com-

pany of Chicago, manufacturers of albumenized baking powder, to revive the fashion, indeed, to improve upon the ancient weapon of the food dopesters.

On August 11th, Dr. E. F. Ladd, food commissioner of North Dakota, was returning home from the Convention of Food Officials in Detroit. When he stepped off the train in Chicago, a process-server handed him a summons to appear in the State Court of Illinois to defend a personal suit for damages filed against him in Chicago by the Calumet Baking Powder Company, on account of Dr. Ladd's efforts to prevent the sale of albumenized baking powder in North Dakota. The Calumet company asks \$100,000 damages from Dr. Ladd. Almost at once a New York trade paper published a biased account of the affair and since that time the press has been flooded with paid advertisements which recite the fact that Dr. Ladd has been sued for \$100,000 by the Calumet Baking Powder Company because he tried to stop the sale of albumenized baking powder.

Consideration of the details of this outrage shows beyond the possibility of doubt that it is nothing more or less than a deliberate attempt to intimidate Dr. Ladd and all other food commissioners from enforcing the pure food laws in the courts. Consider first that the suit is filed in Illinois, not in North Dakota. This subjects the food commissioner to added expense for his own and his lawyers' traveling expenses and hotel bills. Consider second that the amount sued for is \$100,000. Every one knows that a food commissioner with that amount of money is as rare as the dodo, which is to say there is no such bird; \$100,000, or even more, may be accumulated through fake testing methods on doped foods, but it never is in the possession of a man like Dr. Ladd, who has unselfishly devoted his life to public work and contented himself with the small salary such work brings. Yes, indeed, the Calumet Company knows Dr. Ladd has no \$100,000. They have good reason to know that Dr. Ladd's salary is his only source of income, but they wish to strike terror into the hearts of all commissioners, and the mouth-filling "\$100,000 suit" is for that purpose.

Consider third that by paid advertisements garbled facts regarding the suit are being put under the nose of each food official. What is the purpose of this? Simply to serve notice upon all food officials that if they have the temerity to endeavor to enforce their laws, and run foul of the Calumet Baking Powder Company, they may expect when away from home, out of their own state, in a strange city, to be pounced upon by a process-server; and subjected to the expense of defending a trumped-up suit.

Every food commissioner in the United States, and every citizen who has a spark of decency or love of fair dealing should resent this bold attempt of the Calumet Baking Powder Company to intimidate Dr. Ladd and the other food commissioners.

THE BAKERS' DIFFICULTY.

SYMPATHIZE with the commercial bakers of the country as we may, and do, it is no less impossible to ignore the great difficulty that lies before them in reconciling the buying public to their intention of doing away with the 5-cent loaf.

The price of all materials used in bread making has gone up—from 14 per cent, in the case of salt, to 100 per cent, in the case of flour—to practically double those of a few months ago. If this advance in the

cost of raw materials has not brought the industry to a profitless basis, then it must have been on a very profitable basis before the rise in prices came. It is demonstrated that the bakers cannot continue under present conditions.

Two remedies are offered, and only two. Loaves must be diminished in size, or the price must be raised. It is proposed to adopt the first-mentioned plan, but with modifications that are readily understood and appreciated. In cost of labor, baking space and fuel, the 5-cent loaf is as expensive to produce as the 10-cent loaf. Consequently, it has been decided that the 5-cent loaf must be withdrawn and the 10-cent loaf be made the standard. The economy of this change is a saving to the consumer as well as to the baker, and in the case of the manufacturer it will go a long way toward restoring the living profit which had vanished or been reduced to the smallest point.

But the bakers realize that it will not be easy to change the habituated 5-cent loaf purchaser to a 10-cent loaf patron. They have not set a date for the withdrawal of the 5-cent loaf, but will try to "educate" the public to take the 10-cent loaf.

The bakers have a difficult task before them. Whether they move forward slowly and cautiously, or summarily put into effect a plan to save themselves, they are bound to lose some trade. Many housekeepers would go back to home bread making. The trade would suffer in diminished consumption as well, caused by a seeming necessity for economy in family circles. Eventually, however, the new scale or plan would be accepted, and trade swell to its normal volume. Would it not be better to make the change promptly and decisively? Would it not more quickly be accepted as an absolute necessity on the part of the bakers, which the public must endure as it has accepted and conformed to the advance in many other lines?

HEARING ON REPEAL OF MIXED FLOUR LAW.

A HEARING was held before the Committee on Ways and Means, House of Representatives, January 31 to February 5, on H. R. 9409, this being a bill to repeal the Mixed Flour law originally enacted as a Spanish war revenue bill in 1898.

It is a significant fact that the rest of this war revenue bill has long since been repealed, the object having long since been accomplished. The wheat milling interests of the country have thus far succeeded in retaining this part of the statute which placed a revenue tax on mixed flour.

On numerous occasions it has been pointed out in the columns of this paper that once the object for which the mixed flour law was passed had been attained, it should, by all manner of logical reasoning, have followed the other parts of the same statute into desuetude by repeal.

The recent hearing before the Committee on Ways and Means was actuated by a bill presented in the House of Representatives by Congressman Henry T. Rainey of Illinois, whose efforts on behalf of the repeal of this unjust and discriminating law are deserving the highest commendation.

The Rainey bill provides for a statement of the percentage of each ingredient contained in mixed flour. This statement must appear on the label immediately below the name "Mixed flour" in such a manner as to readily attract the attention of the pur-

chaser. The national food law, into which this new provision will be incorporated, provides that the officials charged with the enforcement of that law shall make rules and regulations for carrying its provisions into effect. They have ample authority to prescribe the size of type that must be used in stating the percentage of each ingredient in mixed flour and the manner in which the statement shall be made. But the national food law as it stands today does not require percentages to be stated; neither does the present mixed-flour law.

Under the latter, a product made from the grinding or mixing together of wheat or wheat flour as the principal constituent in quantity with any other grain or the product of any other grain or other material may be labeled as "mixed flour" and sold as "mixed flour" if the ingredients of the product are stated on the label. The percentages of the ingredients need not be stated, and the ingredients need not be stated in the order of their proportion.

Consequently, under the existing law, a product may be sold as "mixed flour" even though it be composed in part of flour and in part of other ingredients not flour. Indeed, the other material referred to is not necessarily confined to grain. The language used is so general as to let in any other material not in conflict to the Food and Drug Act. The expressed intention is evident that material other than material made from grain may be used because the words "the grinding or mixing together of wheat or wheat flour as the principal constituent in quantity with any other grain or the product of any other grain" cover everything that might be made from grain, and the words following, "or other material," mean something else different from grain or any product of grain.

The Rainey bill defines "mixed flour" to be a food product resulting from the grinding or mixing together of wheat or wheat flour with any other grain or with the product of any other grain, whether the same contains a leavening agent or not. Analyze this definition as critically as you may, you can not get away from the fact that it limits mixed flour to a product made from grain, and by grain is meant a cereal product, because the word "grain" appears in the definition of "mixed flour" after the word "wheat," and as wheat is a cereal the word "grain" must be held to be a product in the same class as wheat, to wit, a cereal product. Therefore, if the term "mixed flour" is limited to a product made from grain—that is, from a cereal product—it follows that it excludes any product or substance that is not made from grain.

The American Food Journal has repeatedly insisted that the old law should be repealed, not only because of the fact that it imposes an unjust taxation upon the manufacturers of a wholesome article of food, but, moreover, because the repeal of this law is demanded by the best interests of the consumer masses at large.

Why may not the people be their own judges? Why may they not say for themselves since the label would remove all chance of deception, intentional or otherwise, whether they shall use mixed flour or not? They are given this privilege in the choosing of other food products. Why not in the case of mixed flour?

Proceedings of the Twentieth Annual Convention of the Association of American Dairy, Food and Drug Officials.

At Detroit, Michigan, August 7, 8, 9, 10, 1916.

OFFICERS OF THE ASSOCIATION OF AMERICAN DAIRY, FOOD AND DRUG OFFICIALS, 1916-1917.

President—J. J. FARRELL, Dairy and Food Commissioner of Minnesota.

First Vice-President—FRANK A. JACKSON, Chairman Food and Drug Commission of Rhode Island.

Second Vice-President—DR. OSCAR DOWLING, Food Commissioner of Louisiana.

Third Vice-President—B. L. PURCELL, Dairy and Food Commissioner of Virginia.

Secretary—J. B. NEWMAN, of Illinois.

Treasurer—GEO. J. WEIGLE, Dairy and Food Commissioner of Wisconsin.

Executive Committee—PROF. E. F. LADD, Food and Drug Commissioner, North Dakota; DR. S. J. CRUMBINE, Chief Food and Drug Inspector, Kansas; GUY G. FRARY, M. S., State Food and Drug Commissioner of South Dakota.

Committee on Co-operation—W. M. ALLEN, Food and Oil Chemist, North Carolina; F. H. FRICKE, Missouri; W. SCOTT MATTHEWS, Illinois, re-elected.

DEADWOOD, SOUTH DAKOTA, CHOSEN FOR 1917 ANNUAL CONVENTION.

(Compiled from the Report of the Official Stenographer of the Convention.)

THE meeting was called to order by Mr. W. B. Barney, the President, shortly after 10:30 a. m.

President Barney: Now, gentlemen, if you will kindly come forward and take those seats up here, we will start the convention. We will dispense with the invocation, and the first thing on the program will be the roll call by the Secretary, Mr. John B. Newman.

The Secretary called the roll by states.

President Barney: We find that there is a majority of states that have answered to the roll call and if there are any representatives that have come in that have been passed, will you kindly give your names to the Secretary, I mean men that have come in after the names have been called or during the roll call.

Now, in the absence of the Governor and the Mayor of this city Hon. James W. Helme, the Commissioner of Michigan, has kindly offered to deliver the address of welcome, and we will hear from the Hon. James W. Helme. (Applause.)

ADDRESS OF WELCOME.

BY JAMES W. HELME, MICHIGAN.

Mr. Chairman and Gentlemen:

It certainly gives me a great deal of pleasure to welcome to the state of Michigan the Food and Drug Commissioners, Food Control Officials of the various states in this Union. When I asked a year ago to have Detroit selected as the place of meeting, it was because I thought it was admirably appropriate that the Association should come to Detroit, inasmuch as Michigan was one of our greatest states in the production of food and drugs.

Now, some of you have been here in Detroit for a few hours and you are already impressed with the greatness of the city of Detroit, but I want to say to you, not living in Detroit, that I believe that the state of Michigan is far greater in all respects than the city of Detroit, wonderful as the city of Detroit is, and I am proud of it, the state of Michigan outside is still more wonderful. I doubt if very few people, even in Michigan, understand the wonderful state that we have, and I doubt if few of you understand what the various and greatly diversified interests of the state of Michigan are.

To begin with, I want to say to you, I want to show you the kind of a state that you have honored by coming within its borders, and I want you to go back to your various respective states with a high idea of Michigan. Michigan is a very large state in territory. It is the largest state in the Union, with one exception, east of the Mississippi River. Another thing about the state of Michigan is that it has vast latitude and longitude. We have cities in Michigan that are further north than Duluth, and that is supposed to be the zenith city. We have cities in Michigan that are further east than Toledo, Ohio, and Toledo, Ohio, is supposed to be well east. We have cities in Michigan that are west of St. Louis, Missouri, and St. Louis, Missouri, is supposed to be quite far west, and so we have a vast extent of territory, and with that vast extent of territory we have varied resources.

We have the largest coast line of any state in the Union, and a great many people will think that some of those Atlantic states are great states for shipping, but there is more tonnage passing through the Detroit River than passes out of New

York Harbor, so you will see we are a great commercial state.

Now, in food lines you will be especially interested because Michigan is one of the great food states of the Union. For several years we have been first in the production of potatoes. We have produced more bushels of potatoes than any state in the Union. We have not had as good a yield, we do not do as good farming in potatoes as they do in Maine, but we produce more bushels of potatoes, we have up to the last year, when we had a disaster.

We are the second state in the Union in the production of fruit, being exceeded only in it by California, and we are the third state in the production of apples and we produce more apples than the entire Pacific slope, which is called a great apple country. We produce seventy per cent of all the beans that are grown, that are eaten in the Union, so that we have to supply Boston with her intelligence. We are the first state in the Union in the production, the grain rye, I mean, not the other kind, because the majority of Michigan is under dry territory.

We have more sugar factories in Michigan than any state in the Union and we produce more pounds of sugar than the state of Louisiana, which has always claimed to be the great sugar state of the United States. We are the first state in the Union in the production of salt, and you can all of you remember that if any of you get too fresh while you are here. This county of Wayne is the greatest salt producing county in Michigan. In fact, it is the basis of all our chemical industry.

We are the greatest state in the Union in the production of fresh waer fish, and you need not be afraid to eat the fresh water fish that may be served to you because they are fresh from Michigan waters, the Great Lakes, the unsalted seas, as the steamboat companies have it. In dairy lines we also stand very high. We are the third state in the Union in the production of cheese, being exceeded only by Wisconsin and New York. We are the fourth state in the Union in the production of dairy products generally and we are the fifth state in the production of butter. A large number of condensers and creameries are dotted all over the country, and of the eighty-three counties in both the upper and lower peninsula there is not a single county but that has creameries or cheese factories or condenseries.

So, you will see that we are a great food state. In the manufacture of drugs. We are a great drug state. You will be given an opportunity to see before you get away the largest establishment of drugs and pharmaceutical preparations that there is in the world, and because of the fact that that is such a large establishment, we have several other establishments in this city which would be called large in any other city.

As a mineral state, Michigan is a great state. We are the second state in the Union in the production of iron, being exceeded only by Minnesota. We are the third state in the Union in the production of copper, being exceeded only by Montana and Arizona. So, you see, we have vast mineral resources here. We have vast manufacturing establishments. We produce sixty per cent of all the automobiles in the world, which is a pretty fair proportion for this great state of Michigan.

All of you know that as a special favor to this convention, I believe, on the first of August Mr. Ford announced a reduction in all automobile prices, so if you get stuck by the railroad strike why you would not have any trouble in buying an automobile and getting home. You would probably get home cheaper than if you went by train.

We are a great furniture manufacturing state. Let me say if during your time here any of you should investigate and have stomach trouble of any description you can go to a drug store and buy peppermint and know that three-fourths of all the peppermint in the world is manufactured and grown in the state of Michigan.

I am glad to welcome you to this great state, to this great

JOHN J. FARRELL



President of the Association of American Dairy, Food and Drug Officials.

city. I hope you will enjoy the opportunity of being with us. I am proud of the state, I am proud of the city, I am proud of the food officials of the United States that are doing so much to uplift humanity in every way and I am only too glad to have this Association present in my own home state, and I welcome you in every way that I can. I thank you for your attention. (Applause.)

President Barney: We have called upon the Honorable Dr. H. E. Barnard of Indiana to deliver the response to the address of welcome. We will now hear from Dr. Barnard. (Applause.)

RESPONSE TO ADDRESS OF WELCOME.

H. E. BARNARD, INDIANA.

Mr. Commissioner:

I think the members of our Association all quite agree that if Commissioner Helme is not in addition to being Dairy and Food Commissioner of Michigan the Immigration Commissioner of his state, that the people of Michigan have overlooked a splendid bet. I should also think that he might well perform the duties of the President of the Chamber of Commerce of his splendid state, because he certainly knows what his state can do and he is not afraid to tell of it.

In addition to the climate of Michigan, which is always agreeable to summer visitors, there is another reason why we are most opportunely gathered at Detroit at this time. If I am not mistaken, twenty years ago this year our Association was organized at the city of Detroit. I believe that only one of our present members was present at that time. Conditions have changed very greatly in the last twenty years, but it is certainly fitting that we have come back home to recite the changed conditions which now affect the food industry of the United States.

At that time there were no food laws such as we now know them. There was no Federal legislation, there were no organizations of food officials operated as we now operate them. Today we stand not twenty years ahead of the time when we held our first meetings, but whole epochs. The food supply of our country has been entirely revolutionized, and I take it you will agree with me, revolutionized very largely through the efforts of our Association. At that time the only question which could be discussed properly was the necessity for laws regulating the character of foods, and the prevention of adulteration.

At the present time that work has been so effectively done, so well accomplished, that we are no longer considering it of paramount importance, and we have passed on to, as we think, other and more valuable work.

Today the work of the Dairy and Food Official is largely constructive rather than regulative in character, and, as I see it, the work of the future will be not the suppression of the one per cent who must of necessity be controlled by police court methods, but by the development of a larger, finer and better food industry by co-operation with the producer of the raw material and the manufacturer of the finished product. And so, gentlemen and Mr. Commissioner, we are glad to be back with you again at Detroit, our birthplace, to consider the problems which confront us, the food officials of the country, and I assure you on behalf of our Association that we appreciate the splendid welcome you have given us to your home state.

President Barney: Gentlemen, the next will be the appointment of committees, and for your Credentials Committee I have the names of Frank A. Jackson of Rhode Island, R. H. Hoffman of Texas, R. E. Rose of Florida, A. M. G. Soule of Maine, F. H. Fricke of Missouri.

On the Nominations Committee:

Dr. S. J. Crumbine, Kansas; J. P. Street, Connecticut; Heber C. Smith, Utah; G. G. Frary, South Dakota; J. J. Farrell, Minnesota.

On the Resolutions Committee:

Geo. L. Flanders, New York; James W. Helme, Michigan; Dr. E. F. Ladd, North Dakota; William Frear, Pennsylvania; Geo. J. Weigle, Wisconsin; Dr. J. T. Willard, Kansas; B. L. Purcell, Virginia.

The next will be the report of your Secretary.

REPORT OF SECRETARY FOR 1916. INCLUDING REPORT OF EXECUTIVE COMMITTEE.

Immediately after the Association adjourned at Berkeley, California, August 5th, 1915, the newly elected Executive Committee met in the parlors of the Claremont Hotel. There was present President W. B. Barney, of Iowa; Dr. E. F. Ladd, of North Dakota; Dr. S. J. Crumbine, of Kansas; Mr. R. M. Allen, of Kentucky, and Mr. J. B. Newman, Secretary, of Illinois.

In accordance with the by-laws of the Association the President acts as Chairman of the Executive Committee and the Secretary of the Association as Secretary of the Executive Committee.

It was moved, seconded and carried that the Executive Committee instruct Mr. H. B. Meyers, publisher of the American Food Journal, to have published 200 copies of the proceedings at a cost of \$200, and that he be given a copy of the Journal of the proceedings in compliance with the contract made by the old board.

There was a discussion regarding the condition of the

finances and what might be done to better this condition. The Secretary was instructed to figure out some plan.

There was a discussion regarding the constitution and by-laws; no one seemed to have a copy.

The Secretary made the announcement that he believed secretary work did not contemplate any part of the treasurer's work, and in organizations and associations that he had been a member of they were kept separate, and that unless he was otherwise instructed the treasurer should have charge of the collecting of dues and paying bills. This met with no objection. The Secretary said he would notify Treasurer Jackson to that effect.

The Secretary was instructed to draw vouchers for the bills for the Berkeley meeting as soon as he received them and mail them around to the different members for their signatures and on to the Association Treasurer that they should be paid as soon as there was sufficient funds collected.

The meeting adjourned to meet at a future date, subject to the call of the President.

J. B. NEWMAN, Secretary.

Berkeley Hotel, August 5, 1915.

Pursuant to a call by the President, the Executive Committee met at the Blackhawk Hotel, Davenport, February 6th, 1916, at 9:00 a. m.

The meeting was called to order and the following answered to the roll call as being present: Mr. W. B. Barney, Chairman; Dr. S. J. Crumbine and Mr. J. B. Newman, Secretary.

There was a discussion over the lack of publicity received by the 19th convention held at Berkeley. Dr. S. J. Crumbine made the motion, seconded by Mr. Newman, that Mr. R. M. Allen, member of the Executive Committee, be appointed as publicity agent to take charge of matters for the press at the next convention. The motion was carried.

There was a discussion over the dates of the 20th annual convention. Dr. Crumbine moved that August 7th, 8th, 9th, 10th and 11th should be chosen, as these dates had been named by Mr. Shannon of Michigan, after being in conference with the Chamber of Commerce at Detroit, that all other dates had been taken by associations that would interfere with our share of publicity and would cause the hotels to be crowded.

The committee then took up the matter of the next program. After quite a discussion Dr. S. J. Crumbine made a motion that the tentative program as outlined be adopted. I will not read this tentative program because with a few changes it is the one which you have before you today. In getting up the tentative program we had quite a discussion about the afternoon or day set aside for the trade. It seemed that as much as the Association wished they could not allow all the people to talk, and there was a feeling that the Association had preferred some people over others. This was the last thing intended, and it was very desirous that no opportunity should be given for any one to think this, and we think we came to a happy solution when we decided to have every report or paper discussed, in some instances by people especially qualified to discuss it and in all instances by the Commissioners and then by the trade, and it is the hope of the Executive Committee that the trade will avail themselves of this opportunity to get right into the discussion.

We feel there are a great many points that are never brought out that will be brought out in this way, some by the trade and some points by the Commissioners in response to questions or assertions made during the discussion. We feel that discussion will be of greater value to the Commissioners and the trade and consequently to the consumer, as he is the one that benefits by the activity of this Association, not only in the yearly work of its members, but in the work of those assembled here in convention.

During the year the Hon. R. M. Allen obtained leave of absence from his work as Dairy & Food Commissioner of Kentucky and resigned, causing a vacancy on the Executive Committee. President Barney appointed the Hon. James Foust to fill the vacancy.

You will recall that at the last convention the Secretary in his annual report read as follows:

"On motion of Mr. Winkjer, Dr. H. E. Barnard of Indiana was elected a member of the Standards Committee from the Association, which is a joint committee composed of three members from the Association of Official Agricultural Chemists, three members of the United States Department of Agriculture, and three members from this Association. For the benefit of new members of the Association I

will state that this joint standards committee was provided for by resolution at the conference of State Food and Drug Officials with the Secretary of Agriculture and the Bureau of Chemistry. The resolution provides that the members from this Association shall come from the scientific section of the same and be appointed by the Executive Committee of the Association.

"As there was no direct connection between this Association and that conference except many of the members of the conference were members of the Association, and as our constitution does not provide for a standards committee, it would appear that the constitution of the Association should be amended to provide for a standards committee. Other committees of the Association are provided for by the constitution; but so far as this Association is concerned, there is no authority for the standards committee, probably the most important committee of the Association."

After considerable discussion over this report regarding the election of members from this Association to sit as members of the joint committee on Definitions and Standards, the Executive Committee recommended that the constitution be amended to read as follows:

Article . . . Committee on Definitions and Standards. That three members be elected to serve with an equal number of members selected by the Official Agricultural Chemists and Bureau of Chemistry of the United States Department of Agriculture to constitute a committee on Definitions and Standards. The tenure of office of the three members representing the Association shall be for not to exceed three years, the Association to elect from its membership one member for a term of one year, one member for a term of two years and one for a term of three years, and each succeeding year the Association to elect a member for a term of three years.

Moved by Dr. S. J. Crumbine and the Secretary, J. B. Newman, that the Treasurer send out notices of back and current dues with a letter urging all in arrears to pay up as needs were urgent to meet bills past due and current bills coming due. Carried.

Moved by Dr. S. J. Crumbine and seconded by J. B. Newman, Secretary, that the Treasurer be instructed to settle with Mr. Meyers on the basis of past contract, viz.: One-half expense for transcribing proceedings of last annual meeting to be borne by Mr. Meyers. Carried.

Moved, seconded and carried that it be the sense of this committee that any city asking for future meetings of the Association should be requested to take down the notes of the proceedings and furnish the Association 100 bound copies of same free of charge.

As the convention had already decided to go to Detroit it was impossible to make the arrangements referred to by the Executive Committee with the Detroit people, viz.: That any city asking for the convention should furnish a stenographer and 100 bound copies of the proceedings.

There was a discussion on co-operation how the Association could best aid Mr. Abbott's department and secure the greatest results for the different states which form this organization. The Secretary was instructed to write Dr. Abbott regarding co-operation.

The Executive Committee was in session from nine o'clock in the morning until ten o'clock in the evening on this date. That was the only time that the majority of the committee were able to get together. Dr. Crumbine stopped in the office once and Dr. Ladd stopped in the office once and we discussed matters. President Barney on several occasions passing through Chicago stopped and we went over different matters. The most of the business of the Executive Committee was transacted through the mails.

It was the beginning of 1916 before we received the 200 copies of the report of the Berkeley meeting, and I immediately sent out a copy to all the members who were present at Berkeley and to others who paid the \$1.00 fee. There were requests from two or three Efficiency Departments and Laboratories that could not pay, and after consulting with the President, we thought the good work would be benefited by having these reports available and they were sent free. I still have in the office about 100 copies.

When I received the files from Ex-Secretary Allen I found amongst them two copies of the constitution and by-laws. I had five extra copies typewritten and mailed each member of the Executive Committee. In my estimation they are certainly incomplete and inadequate. A committee should be appointed to revise the constitution and by-laws and report at the next convention. This, in my estimation, is worthy of very serious consideration.

For your benefit I will read right here the present consti-

tution and by-laws from the only two printed copies I have ever seen and from which copies were made for the Executive Committee. (The Secretary now read the constitution and by-laws.)

The Secretary continued his report. These by-laws may be amended at any regular meeting by a two-thirds vote of the states represented.

Since the adjournment at Berkeley various people have solicited the privilege of getting up a large edition of the program and proceedings on an advertising percentage basis. It was my understanding that the Association did not approve of this, but I took it up with the members of the Executive Committee before I decided to tell any of these gentlemen and I found the Executive Committee was opposed to a program or a report of the proceedings gotten up in this manner.

In compliance with motion made at the Executive meeting after the Berkeley convention, the only scheme I have been able to figure out whereby we could without criticism increase our revenue was to have a register fee for all people attending the convention who, as State or Federal Officials, did not pay the \$10.00 or annual dues. For this registration fee they would secure free of charge a badge and a copy of the proceedings of that meeting. The badge, of course, would admit them to all of the proceedings and festivities of the convention, and this scheme would also secure a more liberal circulation of the annual report. Many of the people who attended the Berkeley convention as guests or representing various firms have not received a copy of the proceedings. Consequently papers and discussions are not in the hands of a great many people who would be better advised if they did have them, and I think that we should aim to secure as large a circulation as possible of this report. In this way those attending the convention will not forget about it and as they pay the fee and secure the badge their names and addresses will be taken and there will be a copy of the proceedings mailed them as soon as they are issued. Money derived in this way should take care of the cost of printing the proceedings and leave the Association free from the assistance of any person, firm or corporation.

The convention is operating under this system.

As Secretary of the Association I have countersigned and forwarded on to the members of the Executive Committee for their signatures, who in turn forwarded on to the Treasurer the following vouchers:

E. M. Uzzell & Co., Voucher No. 1.....	\$16.50
F. L. Shannon, Voucher No. 2.....	4.75
Torch & Franz Badge Co., Voucher No. 3..	7.33
General Shorthand Rep. Co., Voucher No. 4	151.75
American Food Journal, Voucher No. 5...	50.00
American Food Journal, Voucher No. 6...	150.00

Total\$380.33

President Barney: What will you do with the Secretary's report?

Mr. Frank A. Jackson: Mr. President, I move it be received and placed on file.

Dr. S. J. Crumbine: I wish to ask a question. Does the acceptance of this report carry with it the recommendations made, namely, the appointment of a committee for revising constitution and procedure of this convention?

President Barney: I would rather understand that possibly it would carry that recommendation with it.

Mr. W. W. Randall: The motion was that it be accepted and put on file and it seems to me that it does not require anything else.

President Barney: I think possibly that might be left out and considered later for revision.

Mr. G. L. Flanders: I am under the impression that the Secretary's report is simply a report of transactions that have gone by, and we accept it as a true report. That report makes recommendations to the committee and I do not think in accepting the report that that necessarily binds us to have that committee. I think it would require an additional resolution.

Mr. Frank A. Jackson: Mr. President, that was my impression when I made the motion.

President Barney: I will put the motion with that understanding. All those in favor will please signify by saying "Aye." Contrary "No." It is a vote.

Secretary Newman: I wish to say that we find there was a motion at the previous convention to amend the by-laws and there were efforts made to amend them and certain amendments were recommended. We have been unable to

find the report of that particular convention as to whether they were read or whether they were acted upon.

Now there was an amendment gotten up and read, but, as I say, we have not been able to find the official report of that convention to know whether they were actually adopted or not, but by making this motion that it be revised we will get into that matter and find the proposed copy, anyway take it with the old copy and we hope to have a revision of the by-laws and constitution.

If those proposed by-laws were actually adopted there is no harm done and if they are sufficient, well and good. We had quite a discussion about it yesterday, but there was no report of that particular convention here.

President Barney: Now we will have the Treasurer's report, Mr. Frank A. Jackson of Rhode Island, Treasurer

		Dr.	Cr.
1915.			
Aug.	2. Cash on hand.....	\$ 58.04	
"	2. Mr. Allen, one-half of dues for 1915—		
	Missouri	5.00	
Oct.	16. John B. Newman, check which is to		
	pay annual dues for 1914:		
	North Carolina	\$10.00	
	Indiana	10.00	
	Nevada	10.00	
	Oregon	10.00	
	Utah	10.00	
	Annual dues for 1915:		
	Iowa	10.00	
	Nevada	10.00	
	Maryland	10.00	
	Washington	10.00	
	Florida	10.00	
	Wyoming	10.00	
	California	10.00	120.00
Oct.	16. E. M. Ussell & Co., Voucher No. 1.....	\$ 16.50	
"	23. F. L. Shannon, Voucher No. 2.....	4.75	
"	23. Torch and Franz Badge Co., Voucher		
	No. 3	7.33	
Nov.	6. General Shorthand Rep. Co., Voucher		
	No. 4	151.75	
Feb.	2. J. B. Newman, postal order for Proc.		
	9th annual convention.....	1.00	
"	29. Library of Congress—10th Annual Re-		
	port	1.00	
Mch.	9. Rhode Island dues for 1916.....	10.00	
"	21. Minnesota check for dues, 1915.....	10.00	
"	25. A. C. McClurg & Co., Proc., 1915.....	1.00	
"	27. North Dakota Agri. College & Exp.		
	Sta., dues for 1915 and 1916.....	20.00	
"	30. Kansas State Board of Health, dues		
	for 1915 and 1916.....	20.00	
April	11. Francis M. Sutton & Co., Proc. of 1915	1.00	
"	22. American Food Journal.....	50.00	
	Municipal Reference Library, New		
	York City:		
"	27. Bureau of Chemistry—Dr. Alsberg,		
	\$5.00; Mr. Abbott, \$5.00—1915.....	10.00	
May	1. Food & Drug—Michigan dues, 1915....	10.00	
	North Carolina Historical Commission		
	—Proc. of 1915 Copy—No charge.		
"	10. Dues for 1915—Texas.....	10.00	
"	10. Dues for 1915—Kentucky.....	10.00	
"	12. E. G. Bennett, one-half 1915 dues—		
	Missouri	5.00	
"	12. Dues, 1915 and 1916—Virginia.....	20.00	
"	22. Dues, 1915—North Carolina.....	10.00	
"	22. T. B. Bryan, copy of Proc.....	1.00	
"	22. Louisiana—Dues, 1915 and 1916.....	20.00	
"	22. Illinois—Dues, 1915	10.00	
"	22. Ohio—Dues, 1914 and 1915.....	20.00	
"	22. South Dakota—Dues, 1915 and 1916...	20.00	
"	22. Mississippi—Dues, 1914 and 1915.....	20.00	
"	22. Pennsylvania—Dues, 1915	10.00	
"	22. Tennessee—Dues, 1915	10.00	
"	29. Idaho—Dues, 1915	10.00	
June	5. Maine—Dues, 1915	10.00	
"	12. One-half stenographic expense at		
	Berkeley, Cal.	75.87	
	American Food Journal, check by		
	Voucher No. 5.....	150.00	
July	24. Connecticut—Dues, 1915	10.00	
	Total	\$538.91	\$380.33
	Balance		\$158.58

Respectfully submitted,

FRANK A. JACKSON,
Treasurer.

President Barney: Gentlemen, what shall we do with the report of the Treasurer?

Mr. R. E. Rose: I move it be accepted and placed on file.

Mr. W. W. Randall: I second the motion.

President Barney: It has been moved that the report of the Treasurer be accepted and put on file. Is there anything to be said upon the question? If not, all those in favor of the motion please say "Aye." Contrary "No." The motion prevails.

President Barney: Now, gentlemen, I wish to make this announcement, that whatever resolutions come to this body must be handed directly to the members of the Resolutions Committee. This body will not have time to discuss resolutions on the floor. They will be discussed when the Resolutions Committee reports. Now, are there any announcements to be made at this time? I want to say that the Hon-

orable Carl Vrooman, whose name does not appear on our program, has consented to be with us tomorrow and deliver a talk in the morning and I would like to have all of you present, as I know you will enjoy what he will have to say. He is a very high-class gentleman and I know full well he will have something interesting for us.

Now, if there is nothing further before this body we will stand adjourned until two o'clock.

SECOND SESSION, MONDAY, AUG. 7, 1916, 2:30 P. M.

President Barney: Now, gentlemen, I have requested the Secretary to make a statement as to the proceedings this morning, which we find were just a little bit out of order on account of a misunderstanding.

Secretary Newman: When I received the files from my predecessor, amongst them were two copies, bound copies, marked "By-Laws of the Association," and I went on the assumption that they were the by-laws of the Association. There were no printed reports except the eighteenth and nineteenth annual reports. Yesterday at a meeting of the Executive Committee there was some doubt expressed as to whether the by-laws had not been amended. The only thing that drew our attention to amending the by-laws was the proposition brought forward at Berkeley last year that there had not been a provision for the three men from this Association as members of the Standards Commission, and it was mentioned then and was taken up yesterday that there should be an amendment to the constitution to provide for the proper membership to this Committee of Definitions and Standards.

It came out then that there had been a discussion of the by-laws at some previous session. Nobody was certain whether they had been voted on and adopted or not. Now, we are very much obliged to Mr. Meyers, he happened to have a printed copy of the Sixteenth Annual Convention and the fact that that report shows that an amendment to the constitution was adopted at the Seattle convention at Washington.

Now, those articles will have to be amended to provide for the Committee on Definitions and Standards from this Association, and so if you wish I will read these and they will be substituted for the old body that I read this morning or these will be inserted without reading, some of you may remember them. As I said, we are grateful to Mr. Meyers, who had a copy of the sixteenth convention, which shows that there was a discussion.

We find that they provide for a Nominating Committee and they provide how the Resolutions Committee should be appointed so the President will notify those whose names were put on the Nominating Committee that they are dropped and reappoint the Resolutions Committee in compliance with the new constitution, which says that the Resolutions Committee shall be composed of the Chairman of Sections A and B, and three members appointed by himself. Now, it is unfortunate, of course, that we did not have this thing right in the morning, but I do not see how it could be helped in view of the fact that I had absolutely no report of the sixteenth annual proceedings nor any other year except the eighteenth and nineteenth.

President Barney: Now you have heard the explanation by the Secretary that the Committee on Nominations be dropped and I will appoint as a Committee on Resolutions the following:

Geo. L. Flanders, New York; William Frear, Pennsylvania; James W. Helme, Michigan, and by virtue of their office, Dr. H. E. Barnard, Chairman of Section B; Mr. F. A. Jackson, Chairman of Section A.

PRESIDENT'S ANNUAL ADDRESS.

BY W. B. BARNEY, IOWA.

Gentlemen of the Convention:

It seems right and fitting that this Association should return to the place of its birth after twenty years. We read in holy writ that where there is no vision the people perish. The handful of men who gathered here two decades ago and perfected this organization must have had a broad and comprehensive vision.

I believe it incumbent on us at this time to pause for a moment while we look over the years that have gone, recognizing, as we do, the immense amount of good that has come to our people and this nation by reason of the enactment and enforcement of our Dairy, Food, Drug and Sanitary Laws, in which the founders of this Association have played no small part.

We, that have taken up the burden of recent years, should still further broaden our vision. It is more apparent each year that as our population increases added responsibilities are sure to come.

We hear much in these days about preparedness. A people that is not well fed and nourished cannot to the fullest extent enjoy the blessings of peace or withstand the horror and devastation of war. Wholesome, well cooked food will without doubt play a greater part and receive more consideration from this time on than ever before. If there is anything in the practical application of the precept that each man must be his brother's keeper, this will apply with double force to this body and every Commissioner in this land.

That we, if we shall do our full duty, are going to pay more attention to the preparation, care and cooking of food is quite evident. It was my lot to put in a number of years on the road depending on hotels and restaurants for my meals. During this time I was too frequently reminded of the old saying that "The Lord furnished the victuals and the devil the cooks."

Our Domestic Science schools are doing a vast amount to remedy this. It is my belief that much can be done in the home. The housewife that cannot properly prepare, cook, and serve a meal is not worthy of the name of wife. The mother that does not see that her daughter is schooled and learns the fundamentals of cooking is neglecting an important duty that she owes the daughter, the daughter's husband, if she has one, and the public at large.

Too many meals are eaten simply to satisfy the appetite, not because they are appetizing. If what we eat today is walking around, thinking and talking tomorrow, is it not important that this food or fuel for the human body be of the right sort and properly prepared? A locomotive or other engineer would not expect to get good results from the use of an inferior grade of fuel. If a certain kind of coal is known to produce a given quantity of steam, this brand is dependable and would be selected in preference to another having less generative power.

For years a study has been made of the fuel question. It is well that of late more attention has been paid to the value of the different articles of food in common use. This question has an economic as well as a moral side. It matters little how well we know that $8\frac{1}{2}$ cents worth of milk (or one quart) equals approximately 22 cents worth of round steak, or 25 cents worth of eggs, or 75 cents worth of oysters, unless we do what we can to disseminate this knowledge.

Aside from the value of milk as a low-priced fuel and cheap source of protein, its life-like substances and life-giving properties are as yet little known to the public. Recent studies of milk products have shown why physicians and dietitians are able to get results with milk that are not possible with other foods.

Scientifically these lifelike substances are called vitamins. Their presence in milk and butter is very easily demonstrated. Vitamins are not present in vegetable oils, or the common fats used for the manufacture of oleomargarine. Oleomargarines contain the lifelike substances only in proportion to the amount of butter they contain. We all know that most of the oleomargarine contains so small a quantity of butter as to be negligible.

Section 2515, Dairy Law of the State of Iowa, referring to the Dairy and Food Commissioner, reads as follows:

"He shall have authority to take all proper educational measures to foster and promote the manufacture and sale of pure food and dairy products."

This, or a similar clause, I believe, should be in the food law of every state. Not that I think the police powers and regulations should be overlooked or lost sight of, I know their importance and value, but I am very sure that to get the best results we must develop the educational phase of our work.

During the last year, our department has been issuing a news letter every two or three weeks. These letters go to three or four hundred weekly and a number of daily papers. They contain regulations and give information on current subjects. We find this a good way to keep the public well informed.

After an experience of over six years at the head of the department in our state where I have the enforcement of twelve laws, I am obliged to say the license feature in many of these laws is the strongest, best and most helpful section they contain. We believe that the license clause in our sanitary law has cut down the total number of prosecutions over one hundred per cent. We have not been obliged to revoke more than a dozen licenses a year.

The revoking of licenses is a "big stick" with which to line up the wilful offender. This is especially true where the Commissioner is given the authority to revoke the licenses. You can thus readily see that the pecuniary gain is not the only advantage to the people and the department of what may be termed the license clause. I do not think these licenses should be large enough to be burdensome. Ours range from \$1.00 per year for milk dealer's license to \$3.00, the fee for testing wagon scales. This revenue to the state has increased in the last six years from about \$9,500 to \$58,000.

We find, too, that our legislature is more apt to look with favor on changes in our old laws, or the enactment of new legislation, if a Commissioner can show that the department is self-supporting or nearly so.

It appears to me that the practical application of the commonsense business methods in conducting a department has much to do with its success. If you were managing a business enterprise of any sort and wished to employ an assistant you would not expect a man to make good that had been schooled in an entirely different line of work.

Too many Commissioners are hampered by being required to take on assistants or inspectors as a reward for political service. I have been most fortunate in this respect, as I have always had a free hand. If the head of a department is not qualified to pick out and appoint his assistants he most certainly is not big enough to get the work out of them after they are selected by someone else.

I think, too, that the head of the department, whether he be a Commissioner or a health officer, should be consulted by the members of the legislature as to the enactment of new or amendments to old laws, the enforcement of which he will be charged. The very nature of his work fits him so that he should know what is best or wise in the way of legislation, and a department head would soon be discredited if he is not extremely careful to see that only meritorious measures are enacted into laws.

I would suggest that all laws be so written that the fees and

licenses collected by the department be turned over to the State Treasurer, but the department supported by appropriation made by the legislature, and as near as is possible the laws made to conform with the Federal Food and Drugs Act.

No business, department or association of any kind can do good work unless it is properly financed. Your officers have been hampered this year on this account. Depending, as this Association is, on fees from the different states and only a part of them paying their dues, we are generally short of funds. We, as an Association, should be independent. We should not be placed under obligations to anyone for printing and publishing our proceedings or for any other service.

Your officers should at all times be perfectly free to act. Inspired by this thought, we have tried to devise a plan which we hope may be enlarged and improved upon by our successors another year and finally put the Association on a sound financial basis.

About a month ago I sent a letter to the Governors of the several states, calling their attention to the necessity of the Commissioner or health officer attending this meeting with the chemist. A majority of these executives replied, thanking me for calling to their attention this important matter.

As the better class of manufacturers, jobbers and venders of products come to a better understanding of the laws and regulations, of which we have the enforcement, I believe we must all admit our work is lessened. Some members of the trade have been a long time in arriving at the conclusion that while the food laws were enacted primarily to protect the consumer, they are in fact as helpful to the honest dealer as to the consumer.

Co-operation between the trade and the law enforcing body has been, and will be, an important factor in this work. I am perfectly free to admit that I never recommend an amendment to an old, or sanction the enactment of new legislation without discussing with a committee or others interested the effect that may be expected. I perhaps may not act on any considerable number of suggestions offered, but there is one thing sure and that is that a very large percentage of the trade is trustworthy and dependable, and all that they desire is what is right, reasonable and just.

For some time my conclusions have been that there is no calling in life in which we do not find a small percentage of men who will for pecuniary gain use dishonest methods, or what we might less harshly term, sharp practice. But this is no reason why the better class of men in the trade should not, to a certain extent, be taken into your confidence. It becomes comparatively easy to enforce a law or regulation where seventy-five or a greater percentage of the trade to be regulated are perfectly willing to comply.

I have frequently said in talks before clubs and associations, and at other times, that the best way for the public to get rid of the insanitary place, or a short-weight artist, is to patronize the clean place and the honest dealer.

You and your inspectors are a great moral force in your respective communities. You perhaps have not thought of your calling in this way. Failure to enforce the law may tend to promote dishonesty. This point can perhaps be best illustrated by citing a common instance, as follows:

Linseed oil is a staple article of commerce, handled frequently by the druggist, the hardware merchant, the implement dealer and others in small towns. Say there are six different dealers handling this product and the wholesale price is such that a pure, unadulterated oil cannot be retailed at less than 90 cents per gallon. Five of these men are naturally honest, one of them is a natural born crook and adds to this linseed oil 20 to 30 per cent of inexpensive petroleum oil and cuts the price of his oil to 80 cents. The consuming public is all in favor of one price, and that the lowest. The result is that the unscrupulous dealer receives the patronage and the other five dealers, in self-defense, and with many qualms of conscience, also add the adulterant to meet the cut price. We now have six dishonest men where there was but one before. This sort of thing has happened and may happen where laws regulating such matters are not enacted and enforced.

On the other hand, if the department prosecutes and convicts one or more of these dealers, the prosecution has a wholesome effect on the entire community, causing them to respect this, as well as other laws.

I would like at this time to call attention to the fact that the volume of work done in co-operation with the United States Department of Agriculture has increased at a remarkable rate during the past year. The effectiveness of Dr. Abbott's office in simplifying procedure has been largely responsible for this increase. In Iowa alone our state inspectors have taken over seventy-five interstate samples (principally feeding stuffs) since the first of the year. Close working co-operation between the Federal and State authorities works to the mutual advantage of both departments. The questions of responsibility and jurisdiction are eliminated.

I know of no field in which an efficient system of inspection is more effective than in the present feeding stuffs industry. This industry has grown at a remarkable rate during the past few years and the cash value of shipments is larger than the casual observer would estimate. In the control of this and similar commodities shipped into the state, co-operation with the Federal authorities is a necessity.

During the past season our inspectors sampled over 150 car lot shipments of cotton seed meal, valued at approximately \$12,000. Of the 150 cars sampled, over 100 were found to contain from 2 to 25 per cent less protein than the label declared, or the purchaser's contract called for. As these feeds were bought and paid for before delivered, and neither the shipper nor shipper's agent were located in the state, the purchaser could receive no protection from the state law. Were it not for our co-operative system with the Federal authorities we would be in a compromising position indeed.

At the time of our first experience we took the matter up with Mr. Tolman and worked out a method which not only puts a stop to future illegal shipments, but compelled the shippers to reimburse the purchasers for the deficiency in feeding value of the shipments which had been delivered. This plan has been so effective as to return to our purchasers over \$3,000 since the campaign was inaugurated in February. Rebates are still being made from time to time on shipments delivered in January and

February. As chief of the central district, Mr. Tolman has given the Iowa department every assistance that could be asked.

I believe that the closer we work in co-operation with the Federal authorities in matters of interstate shipments the greater protection we can give the purchasers and consumers of our own states, as well as promote the establishment of uniform laws, rules and regulations.

In conclusion, I wish to thank every member of this Association for their co-operation and support. I believe that we owe our thanks to the Hon. John B. Newman and the Hon. Frank A. Jackson for their splendid work in helping to make this convention a success.

This Association has a great work for the future. The muck-raker like the common housefly will, we presume, always be with us; both are growing less numerous each year. As sanitarians and humanitarians we should uphold high and constructive ideals, going forward with the message of hope by proving that it pays financially as well as morally to do our work in a way that will meet with the approval of our own conscience and all fair-minded people.

President Barney: I will ask the Secretary to read the amendment to the constitution. I want it understood that this is a proposed amendment, something I would like to have read here for your consideration.

Secretary Newman: It is understood that the proposed amendment should be read the first day and thought about and possibly discussed, but not necessarily acted upon today. This article was one drawn up, as you will remember I said this morning to provide for a legal standing so far as this body is concerned of its three members on the Committee of Definitions and Standards. It would have been Article XIV on the old by-laws but it will be an entirely different number since we have found we are operating under another set.

Committee on Definitions and Standards.

That three members be elected to serve with an equal number of members selected by the Official Agricultural Chemists and Bureau of Chemistry of the United States Department of Agriculture to constitute a Committee on Definitions and Standards. The tenure of office of the three members representing this Association shall be for not to exceed three years, the Association to elect from its membership one member for a term of one year, one member for a term of two years and one for a term of three years, and each succeeding year the Association to elect a member for a term of three years."

That is the amendment proposed to take care of this Association on the Committee of Definitions and Standards.

Dr. S. J. Crumbine: Mr. President, I find in addition to this amendment another article will have to be appended calling for this Committee. The article proposed simply gives the working basis of the Committee but Article 4 will have to be amended also, which names the Committees of the Association that should be amended by adding as VI a Committee on Definitions and Standards.

Mr. Jones, Alabama: May I ask you what the provisions of the by-laws are with respect to amendments to the constitution?

President Barney: I think the Secretary has them here.

Secretary Newman: "Amendments to the constitution may be made at any regular annual meeting of the Association provided that such amendment is duly presented for consideration at the previous annual meeting and shall not be adopted except by a two-thirds vote of those present."

Dr. S. J. Crumbine: Well, Mr. Chairman, this amendment was read at the Berkeley meeting, that is the Executive Committee report indicated the necessity of this revision of the constitution and notice was given. Now, unfortunately, the amendment to Article IV was not given, but I take it for granted that might be considered a part of the entire amendment. That seems to me to be the only objection.

Secretary Newman: I read this morning all that the previous Secretary said about the proposition, quoted him in full here and Dr. Crumbine says that the amendment was brought up at the previous meeting.

Mr. Jones: I merely ask the question in order to be sure it an amendment is to be proposed to follow the procedure outlined in the constitution.

Mr. R. E. Rose: I understand that this amendment was offered at the Berkeley meeting last year. The fact that it did not mention the necessity of amending Section 4 which provides for a number of standing committees is not germane. I would suggest that this resolution, this amendment to the constitution be referred to a special committee to report. I think it is necessary to cure that evil and have the amendment to the constitution to amend both sections, because section four provides for the number of standing committees which omits this Standard Committee.

President Barney: The Chair agrees with Dr. Rose that

this should be looked after carefully and I think that is all he has in mind.

Mr. R. E. Rose: I am heartily in favor of the amendment to the constitution because this Standard Committee is one of our most important committees and it is not provided for in our constitution. Now our standing committees are all named in section four and that was simply omitted by the drawer of the present amendment at the last meeting at Berkeley. There seems to be a clerical error, you might say, and I would suggest that the matter be referred to a special committee to report tomorrow morning.

Mr. G. G. Frary: Did Dr. Rose make a motion? If he did, I second it.

President Barney: Did you wish to make that as a motion, Mr. Rose?

Mr. Rose: I do. I understand, as the matter stands now, it is to have the Executive Committee report and make the necessary corrections so that it is investigated and the matter gone through by a smaller body than the convention.

President Barney: Then will you withdraw your motion?

Mr. R. E. Rose: I move it be referred to the Executive Committee.

President Barney: And Mr. Frary seconds it?

Mr. G. G. Frary: Yes.

President Barney: Is there anything further to be said upon the question?

Secretary Newman: I would like to get some information now. It may help the Executive Committee. Whereas this body as a Committee on Definitions and Standards, is it a committee of this Association; does it come under an amendment of section four?

Mr. R. E. Rose: I do not think it does.

Secretary Newman: If that is the case there is no question about the thing being properly presented at Berkeley. It is three members of this Association but the Committee is not a body of this Association.

Mr. G. G. Frary: It seems to me that that is a matter which the Executive Committee can consider.

Secretary Newman: I want to get some enlightenment.

Mr. R. E. Rose: Article four provides there shall be the following committees: An Executive Committee, an Auditing Committee, a Resolutions Committee, a Co-operative Committee, and a Committee on Credentials. Now, there should be a Committee on Standards.

Mr. G. G. Frary: Would it be necessary anyway to amend section four? While it may enumerate the committees it does not limit the committees of the Association, does it? Therefore, it may not be out of place to appoint other committees in addition to those mentioned in section four.

Mr. J. S. Abbott: I am very glad to hear Commissioner Frary make that point, which I think should be well taken. From my information it is customary in bodies of this kind to have certain standing committees of a nature of those or of any other bodies like credentials, auditing, and so forth, but if the Association takes the position or the ground that new committees cannot be appointed until after they have been suggested or until after they have hung over for a year before we could get the results of the work of these new committees, why, I should think it would handicap us very much. For example, I have in mind a committee that is recommended by the Committee on Co-operation, and that is a Committee to report at this convention, at each annual convention on the court decision, both State and Federal, that affect the administration of the Food and Drug laws of the country. It appears to be highly important, and I would hate to have to wait two years before we could get a report of that kind. I would be glad if the lawyers of this convention can tell us that we can go right ahead and appoint any additional committees that are necessary.

Secretary Newman: I think section six, "The Duties of the Officers," which reads as follows, covers that:

"The President shall preside at all meetings and annually appoint such committees as may be authorized or required, whose appointment or election is not otherwise provided for."

Dr. J. S. Abbott: That ought to cover it.

President Barney: Well, it will be understood then that the Executive Committee will take this matter up tonight.

Mr. R. E. Rose: Mr. Chairman, I do not think there is any question that the President has authority to appoint any committee authorized by the body, a special committee necessarily a short lived committee or from session to session, but this new constitutional amendment provides for a permanent body to be appointed for three years, the first three to be appointed for one, two and three years, and each year afterwards a new member of that committee should be

elected, and I think it is a standing and not a special committee and therefore it is a constitutional question.

Mr. George L. Flanders: I just read what purports to be a clause in the constitution which says there shall be the following committee, it does not say there shall be the following Standing Committee but the following committee. It does not wind up by saying "and none others." That means that that is put down in the constitution as positive, that whatever else should be done we should at least have a number of committees. There is another section just read by the Secretary providing for other committees to be appointed not herein already provided for. It seems to me that is plain and square for any committees that this body may want.

Secondly, it seems to me this is not a whole committee, but is three men to be appointed from this body to join what shall be a completed committee on the outside representing this body. I think it is fairly within the power of this body under the constitution as it now exists to go ahead and pass this resolution as they see fit, providing for the three men without any further amendments to the constitution.

Mr. Jones: If it is a question of the interpretation of the constitution of the Association, it seems to me to be simply a matter to be decided by the Association by a vote without proceeding to amend the constitution to provide for the election at this session of a member to co-operate with the Standards Committee who shall serve for one year and another man for two years and another for three years and at the next session a year hence another member can be elected to serve for three years to take the place in the committee of the man whose term expired at that time and if that course is adopted it will not be necessary for the Executive Committee or anyone else to consider the question as to whether or not there is a technical compliance with this provision of the constitution which requires an amendment apparently to be made here before it can be considered.

Secretary Newman: I am much obliged to you, Mr. Jones.

Mr. R. E. Rose: Mr. Chairman, I do not like to occupy the floor but this is a constitutional amendment proposed adversely. I think it is entirely unnecessary. I believe that power exists to appoint such a committee, but we are now considering what the constitution provides for, that amendment to the constitution shall be presented at one meeting and acted upon at another meeting. I do not think it is necessary to amend the constitution at all, but as this has already been accepted and reported back as such, it should be disposed of and disposed of regularly. There is a motion now and a proposition to amend our constitution by providing for this committee. Now it is up to this meeting whether they will or will not.

President Barney: Is there anything further to be said upon this matter?

I desire to appoint on the Auditing Committee Mr. R. E. Rose of Florida; Mr. Emmet Jones of Alabama, and Mr. F. H. Stadtmueller of Connecticut. Now I desire to ask if there are any further amendments to be offered that we might vote on here. It is necessary to do this.

Dr. J. S. Abbott: The Committee on Co-operation wants to offer an amendment to the constitution and it is a little premature, perhaps, to be announcing it here. I have no authority, but inasmuch as it has come up I will have to, or someone will.

The purpose of the constitution as it stands declares that the purpose is to promote uniformity in food and drug legislation. The Committee on Co-operation wants to add to that that the purpose is in addition to that to promote uniformity in the administration of food and drug laws, so that we can control the adoption of by-laws of administration and look toward uniformity in administration as properly within our function as a body. Some of us can do something to promote legislation, but only a few of us. I did not know that that had to be announced a year before it could be acted upon.

President Barney: Dr. Abbott, is that really not a change in the title of the Committee that you are asking for?

Mr. J. S. Abbott: No, this is an amendment to the constitution setting forth the purposes of the organization of this body of officials, namely, to promote uniformity in legislation, food and drug legislation. Now, we want to add to that to amend the constitution by adding to that "and to promote uniformity in the administration of food and drug laws" so that the purpose of the creation of this organization may be broadened and that it may be understood what our purpose is.

Mr. G. L. Flanders: May I ask the gentleman a question?

Don't you want to add the word administration to create uniformity in legislation and administration?

Mr. J. S. Abbott: Well, in addition to the preamble there is a section in there specifically outlining the purposes of this organization. That was the section specifically that I had in mind.

President Barney: I will ask the Secretary to read that section and I will ask you, Mr. Abbott, to submit what you desire in writing.

Secretary Newman:

"SECTION 2.

OBJECT OF THE ASSOCIATION.

"The object of this Association is to promote and foster the enactment and enforcement of such legislation as will protect public health and prevent deception in the production and manufacture and sale of dairy and other food products and promote uniformity in such laws."

Mr. R. E. Rose: "And the administration thereof." That will cover it.

President Barney: Are there any other proposed amendments, gentlemen? If there is nothing further we are ready to adjourn this convention until tomorrow morning at ten o'clock.

Now Section A takes up the work right in this room after this meeting and Section B in parlor B will take up their work, the Food Executives will take their work up right here in this room. I understand from Mr. Jackson that the report of the Credentials Committee is ready and I think it will be advisable to hear that before adjournment. We will hear from Mr. A. M. G. Soule.

(Mr. A. M. G. Soule here presented a tentative report of the Credentials Committee, which was later revised and appears at a later point in the record.)

Dr. J. S. Abbott: The gentlemen who are authorized to represent the United States Department of Agriculture are Mr. Jones, Mr. Henderson and Mr. Rawl in place of Dr. Alsberg.

President Barney: Will you please make that correction, Mr. Soule?

The meeting thereupon adjourned until ten o'clock Tuesday morning, August 8, 1916.

THIRD SESSION

TUESDAY MORNING, AUGUST 8, 1916.

President Barney: Now, gentlemen, if you will be in order we will begin our program. There is a little matter of the payment of dues to clean up this morning and there is no desire I believe on the part of the convention to exclude any State that wishes to continue its membership in this Association, and it seems to me that in order to permit them to do so we must have a motion or something in the way of a resolution to clean up matters this morning before we can get the final report of the Credentials Committee, and Dr. Crumbine has a motion that I believe he wishes to submit.

Dr. S. J. Crumbine: Mr. Chairman, according to the report of the Credentials Committee we discovered that there are a number of States that are from five to seven years in arrears of dues. Now, it is impossible for those States to pay up that arrears of dues for two important reasons: First of all, if they are paid up it will come out of the pockets of the Commissioners themselves. In one or two instances the Commissioners have been paid. In probably every instance unless the Commissioner paid these dues himself he would have to go before his legislature with a deficiency appropriation in order that these dues might be paid. Now such States as Wisconsin, Massachusetts and others are too important States to be barred from the proceedings of this convention, and in each of those two particular instances at least I know that it is not the fault of the Commissioner that the dues have not been paid, and those States are not legally represented here today.

Now, in view of that fact, in view of the fact that we desire that every State in the Union be represented, in view of the fact that it is impossible under present conditions for those States to be represented on our Committee, I move you, sir, that the dues of those States that are in arrears more than two years be remitted and that upon the payment of the dues of the current year; that is, from August, 1915, to August, 1916, such States be entitled to all the constitutional privileges of this convention. I make that motion.

Mr. R. E. Rose: I second the motion, Mr. President.

President Barney: Gentlemen, you have heard the motion

and the second. Is there anything to be said upon the question?

Mr. R. E. Rose: I do not think, Mr. President, it is necessary to discuss it further as Dr. Crumbine has fully explained the situation.

President Barney: All those in favor of the motion please say "Aye." Contrary "No." It is unanimous and it is a vote.

Dr. S. J. Crumbine: Now, Mr. President, I would like to make another motion that practically follows this. There has been a great deal of confusion as to the time in which our dues were to be paid, for what year they were to be paid. We have been paying dues for a sort of a fiscal year running from convention to convention, and we never knew whether we are paying for this year or the preceding year or the succeeding year and thus it happens that many States became in arrears of dues and they were not aware of that fact, and in order to clear the atmosphere and to know where we stand in the future I would make this motion, that from this time forward dues be paid for calendar years beginning January 1st, 1917.

President Barney: You have heard the motion. Is there a second?

Mr. F. H. Fricke: I second that motion.

President Barney: It has been moved and seconded that dues be paid for the calendar year, is there anything to be said upon the question?

Mr. G. G. Frary: Mr. Chairman, is it understood that the dues should be paid for '15 and '16 would apply to the calendar year 1916?

President Barney: Yes. Those in favor of the motion please say "Aye." Contrary "No." It is a vote.

President Barney: Now, gentlemen, the Report of the Committee on Conservation of Food Flavors will be read by Dr. Barnard of Indiana.

REPORT OF COMMITTEE ON CONSERVATION OF FOOD FLAVORS.

BY CHAIRMAN DR. H. E. BARNARD, INDIANA.

Mr. Chairman and Gentlemen:

My discussion of this important subject is set down as the report of the Committee on the "Conservation of Food Flavors." Before going further, on behalf of the members of the Committee I hereby declare that everything my report may contain is a matter of personal opinion, and that the Committee members have had nothing to do with it, either by way of suggestion or criticism.

Furthermore, may I say that I am an eleventh hour Chairman, nominated after our honorable Commissioner from Pennsylvania, evidently realizing that discretion is the better part of valor, had declined the solution of a problem sufficiently large to occupy the attention of scientists for a generation. That you may have no apprehension of what I propose to do with the subject, you may take it for granted right now that I am going to present no results of research, no survey of the literature and indeed nothing but a very casual discussion of the value of flavor in food and a few superficial reasons why flavors ought to be conserved.

Dr. Street in his annual report for 1915 gives me my text. "Allowing for all possible differences of judgment, however," says Dr. Street in discussing the quality of canned fruit, "it was clear that some of the finest appearing fruit was quite deficient in taste and flavor showing that when quality is to be considered, mere size and appearance are by no means the determining factor."

When Ruskin wrote "Modern Painters" he referred to the indulgence of taste as an "ignoble source of pleasure." He lived to realize the foolishness of this sneer and in his final edition of his great essay he inserts an amusing footnote in which, assailing with merciless severity his former opinion, he denounces the cruelty and absurdity of his failing to learn to appreciate the dainties set upon his father's table.

Ex-President Eliot of Harvard expresses the more rational view of our own time in these words: "Sensuous pleasures, eating and drinking, are sometimes described as animal, and therefore unworthy, but men are animals and have a right to enjoy without reproach those pleasures of animal existence which maintain health, strength and life itself."

Henry T. Finck, apostle of flavor, gastronomic expert and one of the few writers on pure food subjects who has never allowed his fad to become an obsession, puts it this way: "Not only have we a right to enjoy the pleasures of the table, but it is our moral duty to do so. The highest laws of health demand of us that we get as much pleasure out of our meals as possible." This is the reason we must give more attention to flavor, and why the food official should seize the opportunity presented him in the course of the routine enforcement of food laws to lend a helping hand to the farmer or horticulturist who is endeavoring to devise means for getting his naturally ripened products direct to the consumer; why he should give serious thought to the problems of the canner and offer the co-operation necessary to the development of methods of canning which will conserve flavor as well as food. That is why the official should be interested in the problems of the cold storage warehouseman who is learning so well how to prolong the life of foods but who has not yet solved many of the problems which concern the conservation of flavor.

What is flavor, anyway? The dictionary says that it is "the

element in the taste of a substance which depends upon the co-operation of the sense of smell." We frequently use the word as synonymous with odor, fragrance and aroma, but we perceive fragrance by the sense of smell and flavor, in part at least, by the sense of taste. A strawberry has both fragrance and flavor. Persons who through unfortunate idiosyncrasies are denied the pleasure of eating strawberries for their flavor may still enjoy their fragrance.

It is probable that flavors are chiefly due to the presence of exceedingly minute quantities of volatile substances which we have designated as esters, ethers and aldehydes. These substances are elaborated in the cells of the ripening fruit where nature, the master chemist, performs wonders in synthetic chemistry which are far beyond our powers, weak imitators of nature's work, to produce. We have tried it, we mix together these essences, products of the laboratory, and fancy in our foolishness that we have counterfeited the true flavor of the strawberry; that we have simulated real wines with our vile concoctions. That is not conserving flavor or developing flavor, it is a base imitation of nature's art.

The fine flavors of meats are quite different from those of the fruits and depend chiefly upon the presence of extractives. Beef bouillon is full of flavor but shy of food value. The beef from which it was produced is nearly tasteless but it is still rich food. A long continued diet of flavorless meat is not desirable. The eater may be well fed but the probability is that he will not be well nourished. More than an adequate amount of calories of food value reckoned as fat, protein and carbohydrates is necessary to proper nutrition.

Whether the influence of flavor on digestion is psychological or is determined by some definite, although as yet little understood reasons, we have got to admit its value, and if we would do our most valuable work we would join hands with both scientists and the practical men who are working out the problem of its conservation.

One of the practical men whom it is almost impossible to reach because of the superior plans to which, by his own bootstraps he has lifted himself, is the so-called French chef, the autocrat of the kitchen and the tyrant who wreaks his vengeance on the poor individuals who have to eat food of his preparing. The expert cook, whether he be high chef or any other name, should be restrained by force or law or an indignant public from destroying, masking or maltreating natural food flavors with the miserable mixtures he calls sauce piquant, chaud-froid sauce al'aurore, salmis sauce, or sauce bigarrade.

Some of us, and by us I do not mean food officials, but those less fortunate men who have acquired sufficient money to dine at hotels and expensive restaurants, have actually acquired a taste for high flavored sauces and lost their natural and honorable desire for well flavored food. Any committee, therefore, which may undertake to establish offhand methods for the conservation of food flavor should begin in the kitchen of the expert cook because that is the place where food flavor is destroyed and undefined, ill-determined, immoral masks for flavor elaborated.

Even a grain of wheat is full of flavor. Horace Fletcher has inflicted a fad of predigesting food in the mouth instead of in the stomach on, if we are to take his word for it, more than two hundred thousand otherwise sane and moral minded people by the single argument that food well chewed is full of flavor.

A piece of dry bread, even of the patent variety, free from bran and roughage, slowly and thoroughly chewed gives off a flavor which excites the gastric glands to intense activity. This fact need not, however, induce us to substitute a diet of dry bread for the normal food of the American table. I refer to it only to point out the really intense flavors which the commonest foods possess and which when properly sought for may always be found.

In concluding, what you have received, I am sure, as a few frothy remarks on a very volatile subject, I suggest for serious consideration the following points:

The fresh fruit and vegetable supply of the large cities is lacking in flavor because it is immature when picked. Most fruits, especially the small fruits, are of finest flavor only when fully ripe and when they come to maturity on the parent stem. The Government, most effectively aided by the State officials of Florida, has done splendid work in stopping the shipment of immature oranges and grape fruit. A similar solution of the cantaloupe and melon problem is respectfully requested of the authorities at Washington. The grower and shipper at one end, the middleman and the distributor at the other, have no desire to sell immature, flavorless food. They would prefer the goods they handle to be of the finest quality and purest flavor, but so long as they are handicapped by present shipping facilities they supply on the one hand and demand on the other, products which will stand up until they get to the home of the consumer.

Our problem, therefore, if it is one which concerns the food official, is not to prevent the shipment of immature fruit or vegetables, but rather to do our part in solving the great problem of quick transportation and immediate distribution. To study that question we must step outside our regular line of duty and join hands with the economists who are studying, more or less successfully, but always faithfully and persistently, the great problem of marketing the food supply.

Our next point of attack should, I believe, be the manufacturing plant, the place where the products of the field and orchard are put in packages for future consumption. We have been very insistent that the product of the canner and packer should be free from mould and low in bacterial count. We have required the elimination of decayed and overripe raw material. We have tried to keep out the flavors of decomposition and decay. At the same time we have undoubtedly made it more difficult for the manufacturer to place in his package the perfect flavors of full maturity. If we are effectively to stop the use of unfit raw material we must go beyond the receiving platform of the factory. We must get back into the field of the farmer, the august potentate of the republic, who because he is a sovereign American citizen reserves to himself the right to do as he pleases, and who insists that a tomato is a tomato whether it is green or rotten, so long as it grew on a tomato

vine, and that cream is cream just so long as the butterfat it contains may be churned out into butter.

Cold storage has been condemned offhand as a destroyer of the flavor of eggs. But cold storage never did one-half the damage to the eggs that the careless methods of handling at the farm have done. Greater care in collecting eggs, in keeping them cool until shipment, in getting them promptly into storage, is real conservation not only of flavor but of a food product of immense value and the elimination of a waste which is now totalled in sums that would build battleships or reclaim deserts.

Perhaps the greatest problem of all of the food industries is that which confronts the buttermaker. With the advent of the centralizing creamery which from an economic and efficiency standpoint is so successfully superseding the little co-operative creamery has arisen the necessity for better methods of cream production and concentration at the factory. While the butterfat globule is destroyed with difficulty, and while it is possible to churn a fair grade of butter out of rancid and fermenting cream, yet a fine flavored product cannot be made except from first-class material.

The creamery is loudly condemned because of the low grade of butter it turns out, when as I see it, practically all the criticism against the buttermaker should be directed against the farmer who produced the cream under unsanitary conditions and held it for too long a time at high temperatures and exposed to damaging influences. It is not possible to conserve food flavor in butter or in any other product unless it is possible to put the flavor in in the first place. I believe, therefore, that the food official may well give serious thought to conservative educational work among the dairymen if he would improve the character of the dairy products of his State.

It is obviously impossible for the food official or his technical staff to do more than help in the great task of conserving food flavor, and that this help may be rendered more intelligently and more efficiently than is now possible, I would recommend to your careful consideration this question: May it not be practical to establish a permanent committee on the conservation of food flavors, and to include on that committee as working members men from all the representative industries which, however great our interest may be in their control, are themselves far more vitally concerned in the development of better methods of work and of a finer flavored product than we can ever hope to be?

President Barney: Now, gentlemen, this is a very important matter and I hope that it will bring out a lot of discussion by the Commissioners first and the trade a little later. We will be glad to hear from any of the Commissioners.

Mr. G. L. Flanders: Dr. Barnard brought out points that were very interesting to me, one of which I have views on, but I find that others differ with me, and I would like to ask him a question. It pertains to labels. If I remember rightly he said in the opening of his paper that it is futile to attempt to imitate the real flavor of fruit. The question I want to ask is this: Suppose a person puts up a flavoring, let us say, to imitate vanilla. I do not quite want to put it that way because then I express the intention of the man putting it up, but supposing you are inspecting in the market and you find some people would say it is imitation of vanilla and others would say it is worthless, and a man would want to have but one label and label truthfully, and he was wavering between the word "substitute" and "imitation." It was composed of vanalin and fine resins indicating probably vanilla bean and poncha and coumarin, and he goes to the official asking whether he should use the word imitation or substitute. Suppose he declines to use the word substitute, the question is, how far could the official go in insisting that that is an imitation and in insisting that he call it imitation? The point of my question hinges on this, I will be frank with you in my attitude. My attitude has been that we have no business to insist, because we could not prove that that was an imitation. I thought Dr. Barnard brought that out very forcefully and yet I have met people who will say that is an imitation and you should force him to label it imitation.

I thought Dr. Barnard brought it out very clearly that attempts at imitation were failures. Have I made myself plain?

President Barney: Dr. Barnard, would you like to answer the gentleman?

Dr. H. E. Barnard: I very much doubt whether I can give Commissioner Flanders any information that will be helpful to him, Mr. President. I think that we will simply have to stand on the proposition that imitations are failures and that, although some of my commercial friends may differ from me, the best of the chemists have never yet been able to successfully equal the product of the vanilla bean which grows on the ordinary plant.

Mr. G. L. Flanders: Now, Mr. President, my attitude has been this, while I have said that we cannot prove that that is an imitation, we cannot insist that he should call it an imitation, that he may call it substitute, but if the manufacturer chooses to call it an imitation we won't be able to disprove it, but we want to hold him responsible for labeling it as the law requires it to be labeled, and it seems to me that is about as far as we can go, and Dr. Barnard touched so closely on the question that I could not help asking it.

President Barney: Are there any other Commissioners who would like to speak on this subject?

Mr. G. L. Flanders: I want to ask him another question. It is very intricate. He speaks of products made of the esters and the ethers, the question in labeling is, how far can a Commissioner consistently go under a law requiring the product to be labeled to show the constituents in requiring the manufacturer to name the esters and the ethers and the other things he named.

Dr. H. E. Barnard: Aldehydes.

Mr. G. L. Flanders: Or is it sufficient to say a synthetic product composed of esters and ethers and possibly of essential oils? If the essential oils are an ingredient should it be required to name essential oils and can they do that consistently if they do not name the esters and the ethers?

Dr. S. J. Crumbine: Dr. Barnard's paper was a splendid handling of the subject which is a very great and important one. To me it does not suggest administration of food laws or anything of the sort, it suggests a great public health problem. The conservation of flavors or the flavor of food is a tremendously important factor in nutrition. The experiments of the great Russian scientist Pawlow in feeding dogs with flavored foods and non-flavored foods very clearly show that the flavoring of foods is a tremendously important element in nutrition. I am glad that he had the courage to take a good, sound crack at the so-called high-priced French chef or the abominable mixtures that they make up to disguise natural food flavors, they take the lemon, and yet that is what we get in our fancy hotels and restaurants. We have that sort of dope served to us with all the fancy prices that contribute to that sort of thing.

I believe, gentlemen, the time is coming when food flavors, together with this other important question of the conservation of the life giving substances in food is one of the questions which food officials will have to take notice of. We have been expending a good deal of time—scientific men—on the question of substance of rations, that is to say, on the question of the number of calories of this thing and that thing; when as a matter of fact the most important things are the things that add to normal nutrition and which are food flavors and the life giving substances known as vitamins. I think we need to have more papers of this sort at this convention. We have talked about labeling and adulteration and one thing or another until it is becoming threadbare. I am glad to hear such an able discussion of this tremendously important subject as we have had today. We as officials ought to set our face steadfastly against the current tendency in the nature of following the effete countries of the East in masking wholesome food flavors, the miserable way in which it is now being done by our high priced chefs and by our ignorant cooks.

It is a fine thing that young wives these days are beginning to learn that one of the things they must do before they get married is to take a course in Domestic Science and know how to cook and to conserve food flavors. I believe that the divorce court will have less to do when they become acquainted with the proper preparation of foods.

Mr. G. L. Flanders: I cannot refrain once more from talking on the subject. The remarks of the last speaker regarding the divorce court reminds me that the divorce courts in the west are really the places to get divorces, as they can be obtained easily there, but in New York we do not have so much of this divorce business, very little.

We have been working on one side of this flavor question in New York for a quarter of a century and we feel that we have accomplished some results. The question, however, that Dr. Crumbine touches on a trifle sarcastically, I do not think he meant it, that we should not trouble ourselves about labeling. As a matter of fact that is thrust on us every day and the chemists today are reporting to us that here is a substance composed of certain things alleged to be the true fruit of the vine, we will say, berries, and the chemist working for the manufacturer insists that it is and our chemists say that it probably is not. We cannot quite prove it. There is a question of whether the public shall be deceived by what Dr. Barnard describes as a futile attempt to imitate the original. What should we say to them in marking the product?

This is a question that is bothering us in New York a great deal, the flavoring question, whether they are going to substitute synthetic flavors for the fruit flavors in the market and how far we can go in requiring them to put a certain thing on the label. For instance, they tell me if you mark a label with the name of the synthetic product, esters and ethers, that on some small bottle you would have to have labels that long (indicating). That is impractical and that is the reason why I raise the question as I thought that a

man like Dr. Barnard and possibly the gentleman who just now spoke, from Kansas, could give us a little enlightenment on how far we ought to go along that line.

President Barney: Is there anybody here that would like to answer Dr. Flanders' question? I see some extract manufacturers in the room and I do not know but that I will have to call on them if the Commissioners do not see fit to answer.

Mr. James W. Helme: Mr. President, I would just like to say one word on that labeling question. Mr. Flanders said it is a great question before us, but I think a good many Commissioners and a lot of us forget the object of labels. Now the object of labels is to inform the consumer what he is getting. Now just tell me how much information the average consumer will get out of a bottle that says, "That is a synthetic product." Why, I did not know what that was myself five years ago and I am quite intelligent.

How many esters and ethers and one thing or another, how much does the consumer know about that? Now let us be sane in our labeling. If we cannot put something onto a label to inform the consumer what he is getting, why let us keep it off the label and not be bothered with a lot of that stuff.

Mr. J. D. Mickle: I have always taken the position that the label should inform the consumer of the product which he is buying and I have found taking that position oftentimes gets me into difficulties. I have found that in a certain class of the manufacturing trade they do not desire to give any more information upon the label than is absolutely necessary or any more authentic information upon the label than will let that label pass. I believe we might say that theoretically the intention of the label is to inform the consumer of the nature of the product which he does buy, but it does not.

As Dr. Helme said, what does the common consumer know about a synthetic product? You may take vanilla extract, for instance, and we read on it it is a compound composed of vanilla, vanalin and coumarin and colored with caramel color. Now, what does the average housewife know about that label? Of course, on the other hand they tell us that we, the Commissioners, are not supposed to protect the ignorant, the uninformed. Well, how far can we go along that line?

Take again salad oils, we will say. You will find in small letters on the label, "Pressed from Cottonseed." The term "Salad Oil" is up in large letters, "pressed from cottonseed" is in small letters. Take the common article of vinegar, you will find somewhere, perhaps, on that label "water added." What does the housewife know about this term? Whom are these laws intended to protect, the manufacturer, and thereby increase his business and add to his volume of sales, or the average consumer in the United States?

I believe there is a wide field in this matter of labeling yet to be gone into. I cannot agree with Dr. Crumbine that it is yet worn threadbare, because before long I believe that we will have to get down to the fact or else drive the other way, and the question with me is on which side of the food proposition are the food Commissioners and those in charge of the enforcement of food laws going to take their stand. I know on what side there is a vast army of people in this United States who are today demanding a more honest label than we now have.

On the other hand there is an influential array of men who seek to put out products under labels as they now stand, and we find it useless, the Commissioners in the States, to endeavor to lead the procession when the United States laws supersede us in a measure, because we are all looking to the Government to lead in the matter of pure food work.

There is a sort of agitation for a greater harmony among State laws, and one State is losing its time when it sets up to demand fair labels when its neighboring State takes no cognizance of the question whatever. I say it is an important question and it is worthy the attention of a whole session of this Association.

President Barney: Now we will hear from the trade, if there is anybody here that would like to discuss this matter.

Mr. H. L. Harris: Mr. President, I would like to speak a word about food flavors. Dr. Barnard stated that it would be well to have fruits and vegetables mature on the vines or trees. If fruit is permitted to mature on trees is it possible to ship same to a market several thousand miles away and be received in good condition? Every one knows when we have our home grown berries and fruits that they have a better flavor than those that are shipped from some States adjoining or some southern States. I do not see how we can preserve the flavoring.

You can go out into the field and pick an ear of corn and put it in your pocket and it still has a sweet flavor. If you go out into your garden and pick your peas or beans and bring them in they have a nice sweet flavor, but if you ship them a thousand miles they lose that flavor.

Under these circumstances I do not see how we can permit fruit to mature on vines and ship it thousands of miles to a market and have it retain its natural flavor. Take bananas; when they are picked green down in the south where when a banana boat comes in they will pick out every one that is slightly ripe so as to preserve the other ones. The greenest ones are shipped to the farthest points, the ripest ones are shipped to the nearest markets and so it is with all fruits and vegetables.

President Barney: Is there anyone else that would like to talk on this subject? If not we will call on Mr. Helme. He has got a small matter that he wishes to present to the body this morning.

Mr. J. W. Helme: Mr. Chairman and Gentlemen, in my talk yesterday in welcoming this convention, I failed to state among other things that Michigan was a great breakfast food State. I will supply that now. Incidentally, I would say that I have here in my hand an invitation for this convention from the Postum Cereal Co. to visit its factory at Battle Creek at the close of this convention. This is the largest breakfast food manufacturing plant in the world. The members who desire to attend can leave Detroit at 8:35 in the morning arriving at Battle Creek at 11:19, and be the guests there of the Postum Cereal Co. and they can leave Battle Creek coming back so as to get to Detroit again at 9:18 the same evening and the Postum Cereal Co. will stand all the expense of transportation and also the expenses of the guests while there. Now I will submit that to the convention and I would like to have an expression of opinion so that the company can know as to whether or not they can expect the members of this convention, and the ladies are included in that invitation.

Mr. G. L. Flanders: Mr. President, I will ask Mr. Helme if he tried very hard to have them give us a per diem allowance.

President Barney: Now, gentlemen, I have this morning an unexpected pleasure. Through the miscarrying of the mails or for some other reason we did not get the Honorable Secretary's name on the program. We have with us this morning the Assistant Secretary of Agriculture, Mr. Carl Vrooman. He has to do with all of our work, the dairy work, the food work and the drug work, it is all under the division that he is looking after and his Assistant Secretary.

I have the extreme pleasure of introducing Mr. Carl Vrooman, Assistant Secretary of Agriculture.

ADDRESS BY MR. CARL VROOMAN,

ASSISTANT SECRETARY OF AGRICULTURE.

Mr. Chairman, Ladies and Gentlemen:

Your Chairman asked me whether I would rather speak in the morning or the afternoon and I said, "I am reminded by your question of a remark of a young girl to the late Adlai Stevenson, former Vice-President, who was called when he was a young man on this young woman and the conversation got a little slack and in her embarrassment the young lady turned to him and said, 'Mr. Stevenson, it seems to me you are stupider than usual this evening,'" so I said, "not afternoon—I am generally stupider than usual." So in self-defense he put me on in the morning. I see he has taken the precaution to put a large life-size watch right in front of me here. He said nothing about it but I get you all right.

Speaking seriously, I think that the work we are engaged in in connection with the food of the country is as important a work as is being done today in this country. In fact, I can conceive of no more important work than the work which the various bureaus of the Department of Agriculture and the various State Officials and others who have to do with the food of the country are engaged in. It is true that a few decades back and back of that for thousands of years there existed in the different countries of the world no such body of men as yourselves, and it is true that some of the people in those times lived to a good old age in spite of the fact that there were no experts to test the food, to test the drinks and to see to it that, so far as it was humanly possible, the food and drinks should be pure.

But that does not prove that the work that we are engaged upon is not one of the most important that human beings can engage in.

Now, there are two points of view from what our work can be looked at and I want to call your attention to just one point this morning. It is not as hot as it was yesterday but at the same time I do not think this is the occasion for a long speech, but there is one point that I would like to call your attention to, and do a little thinking out loud about, and that is just what is the attitude of Uncle Sam and of the various States through the Federal and State Officials with regard to this pure food problem.

What is your function and mine in connection with the manufacturer and the handling of foods? Is the star role of

Uncle Sam that of a cop or that of a patron and promotor of legitimate business? Are we primarily police officers armed with a big stick, swinging it in every direction, is that our primary function or is our primary function a constructive function?

I have taken pains to look over the work of our department recently and of the various other departments of the government and somewhat to my surprise I have discovered that at least nine-tenths of the Federal appropriations are expended in constructive work. Now, it is an old and simple and child-like notion that Uncle Sam's star role is that of a policeman, and that his main business in life is going around hammering evil doers. It is true that occasionally he has to do that, but this is only a detail of work.

His star role is that of patron of legitimate enterprise, that of promotor of legitimate business. Uncle Sam is today the greatest booster of business on our planet, and we ask the co-operation, we representatives of the Federal Department of Agriculture ask the co-operation of the State officials and of the businessmen of this country in our efforts to build up on our continent a business structure with foundations based so strongly that we shall rear that superstructure higher than anything of the kind has ever been reared before in the history

two hundred million dollars, less than one per cent, there is spent on regulatory work and all the rest is spent upon constructive or routine work.

The Army and Navy, of course, is a sort of National Insurance. The Department of Labor has to do with the laboring men, inspection chiefly of immigrants. There is no regulatory work there. The Department of Commerce has ninety per cent of its money spent in constructive work, building legitimate business and only occasionally, when no other method will avail, taking its attention away from the great constructive work that it is doing to take somebody by the nape of the neck who is doing business on the wrong principles and telling him to stop it and seeing that they do stop it.

I remember one or two incidents in connection with our work in Washington which shows the kind of regulatory work we do. One is in connection with oats. The dealers in oats came before our department and they may have come by special invitation, I am not sure about it, at any rate, I remember they were all there, various representatives were there, and the fact came out that they were shipping oats abroad in which there were all the way from seven and a half to thirty-three and a third per cent of barley screenings and trash in addition to some water that had been added by somebody, perhaps somebody who had been in the habit of adding water to their corporation.

At any rate the Federal Department said this will never do and they called on the various dealers in oats to give their views, and nine out of ten of those businessmen said, "We hope you will put a stop to this practice because if one firm is allowed to utilize the unfair methods all of us must resort to them or go out of business." So this regulatory work, what some people are disposed to call ham stringing business and destroying individual initiative has done as much in the interest of the businessman as in the interest of the consumer, I mean the legitimate businessman, and any man who is not a legitimate businessman is not a businessman, he is a commercial pirate.

A businessman is a dignified term. The word businessman means a creator of wealth, a man who performs a useful social function, a man who gives to society a service as valuable as the return which he demands from society in the way of money. A businessman is never a parasite, a businessman is never a looter, he does not belong to the predatory classes. He belongs to the productive classes and to all those productive classes the Federal officials of the Department of Agriculture and of the different States I think I am safe in saying have got one method and that is to join hands with us in our long and arduous efforts to bring the business of America up to the standard that we would all like to see it attain; if we can do this before the businessmen of America we will open up paths to power and wealth more alluring than those that any nation has even seen at any other time in the history of mankind.

This world war has thrown open to us doors which before have been closed in our faces. If we can only put our business on a square, legitimate basis, if we can only say to the world in such a way as to bring conviction with the word that American products means honest products, standardized products, products that will bear inspection from the microscope of the scientist, then the world will hold out its hands to us and all our products will find an easy market not only at home but through the civilized world.

Gentlemen, a great responsibility and a great opportunity is open before us. We are the builders of the business and industrial superstructure of society in this country. If we build wisely, if we build honestly, if we build legitimately and intelligently America will take her place as the moral and material leader of the world.

President Barney: Gentlemen, I know that you have all enjoyed the splendid address of the Secretary. We varied from our program this morning quite a bit. Mr. Newman has some announcements to make and I do not know but what we will have just a little time and we will hear from Dr. Alsberg. I think we will have Dr. Alsberg's paper before we have the announcements. We will now have a paper from Dr. Alsberg, Chief of the Bureau of Chemistry, on "Do We Get Best Results By Education or Prosecution." Dr. Alsberg.

DO WE GET BEST RESULTS BY EDUCATION OR PROSECUTION?

BY DR. CARL L. ALSBERG.

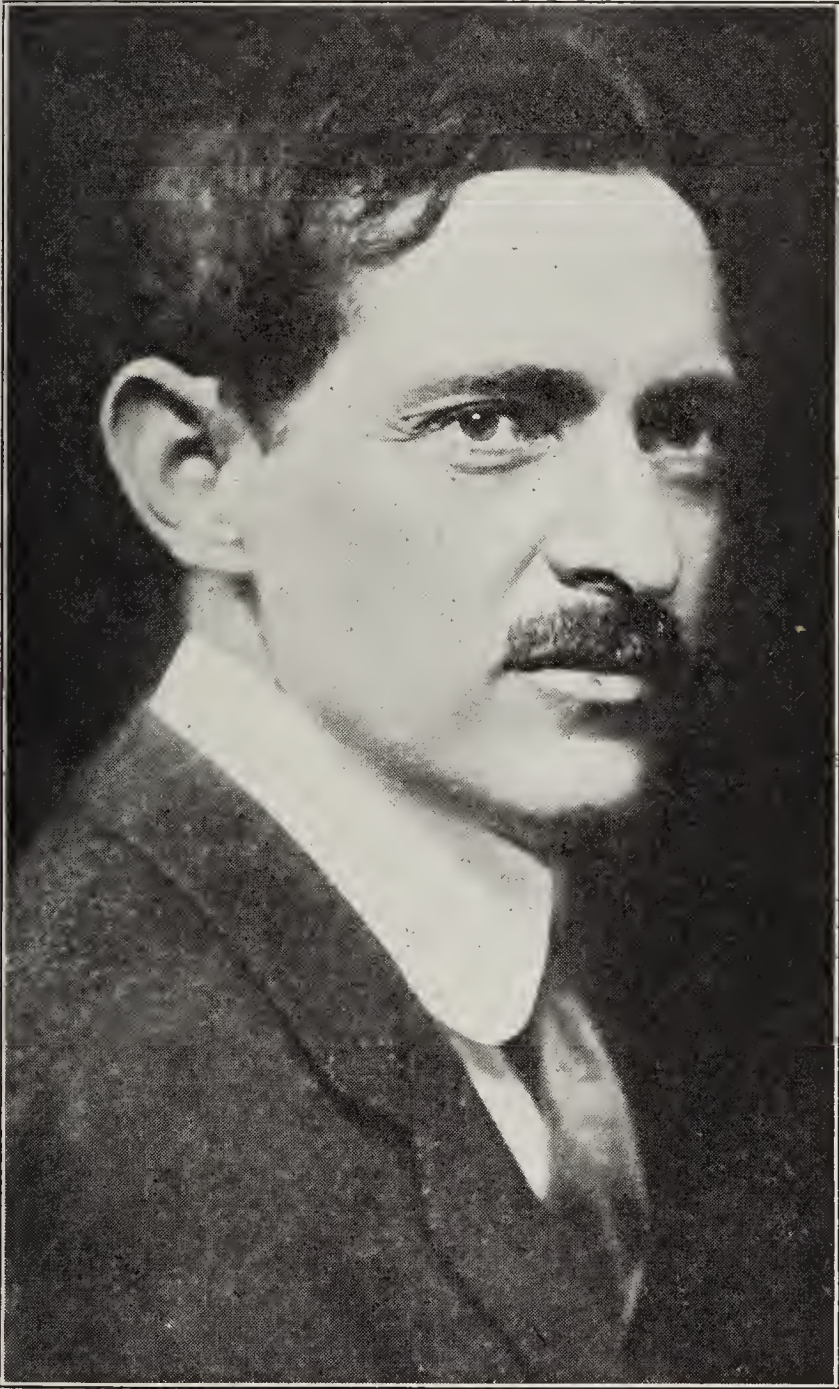
Chief of Bureau of Chemistry, Washington, D. C.

Mr. President and Fellow Officials:

I do not know that the few remarks that I have to make should be dignified by calling them a paper, nor does the title on the program accurately and exactly express the few thoughts that I am going to offer. I think that what I have to say should be regarded perhaps rather as a warning against the tendency which exists and temptation which exists, the temptation to which all of us are subjected and a temptation to to which we sometimes yield, and that is the temptation that arises out of the fact that educational work is a great deal pleasanter to do.

It is a great deal nicer work, it is the kind of work that we all of us would prefer to do exclusively. I have the general feeling that there is at the present time among shrewd officials a tendency to belittle the other kind of work, the work which has to do directly with the enforcement of the law. I have a feeling that sometimes we are almost ashamed of it. I also have the feeling that I personally am to some extent responsible for that feeling.

I personally have tried always, and I think you will agree with me, to emphasize the importance and the value of the educational work. It is better to cure an evil by construction



CARL VROOMAN.

of mankind, and you cannot build a structure high unless your foundations are solid. If you have found Uncle Sam interfering with your business, unless some expert has made an honest mistake, which sometimes happens, you can make sure that there is something wrong with your business, and wherever you see Uncle Sam put up the sign "No trespassing" before a pathway which looks to you like a short cut to wealth and power, you should remember that he also is putting up signs all over the place pointing you to other pathways which are shortcuts to legitimate wealth and power than any of those before which he put the sign up "No trespassing."

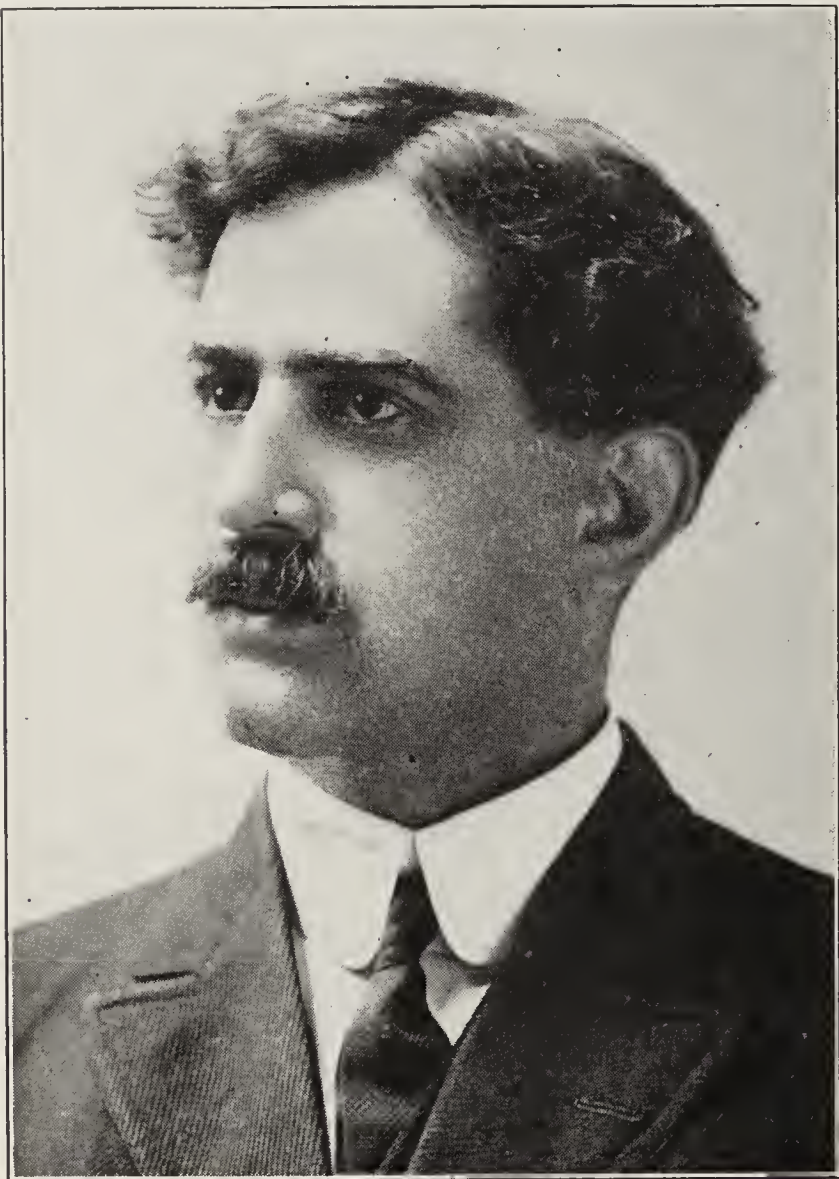
I looked over the figures the other day of the amount of money that is spent by Uncle Sam in regulatory work, you might call it punitive or regulative work, and I found in our own department that one-fifth of our money goes for that sort of work in all the bureaus and four-fifths goes to the constructive work of promoting legitimate business. In the Post Office Department I find a little less than one per cent was spent on regulatory work and more than ninety-nine per cent of the three hundred million dollars that they spent is spent upon constructive work.

I found in the Interior Department where they spend over

and persuasion than with a club, and I have tried to conduct the Bureau of Chemistry in that direction.

In recent months I have begun to wonder whether I have not, in endeavoring to conduct the Bureau in that fashion, caused a certain change in sentiment so that some of us have gone to the other extreme, so that some of us are forgetting that after all what we are appointed to do is to enforce the law and that our educational work, so far as our functions as food and drug officials are concerned are not to be directed from the angle of enforcing the law, and we should employ educational measures where they will accomplish the purpose that the law was designed to accomplish and that we should not be ashamed of our duties as officials intrusted with the enforcement of the law, that we should not hesitate to drop educational measures as soon as we have become convinced that the educational measures are not sufficient to bring about that condition which the law intends shall be brought about.

We must clearly recognize that there are conditions where nothing else will do but to prosecute and that we may hesitate about prosecution, and that we may hesitate to take that position, but I think we must have that clearly in mind and I wanted to take this occasion perhaps to warn the food officials that education and instruction are things that he should carry on, that he should not hesitate to devote a great proportion of his time to that type of work, but that he should not forget that his mission is to enforce the law, and that he should not



DR. CARL L. ALSBERG.

hesitate to turn from education to more drastic measures when he has convinced himself that that is the most effective way of accomplishing that duty with which he is intrusted.

I have nothing more to say than just that. It is not a paper, but I have this distinct feeling that there has been a tendency among us officials to belittle the primary purpose for which we are appointed, the enforcement of the law to succumb to the temptation of doing the pleasanter thing, which is to educate and demonstrate and encourage sometimes to a degree which would interfere with the primary purpose for which we were appointed. That, Mr. President, is the only thought that I have to present at this time.

President Barney: The discussion on this matter is to be led by the Honorable George J. Weigle, Dairy and Food Commissioner of Wisconsin.

Hon. George J. Weigle: Mr. Chairman and Gentlemen, I prepared no paper on the subject because I was not aware of the fact that I was on the program until a few days ago, but I am willing to discuss with you the policy we have adopted in the State of Wisconsin.

While listening to the many addresses, one by Dr. Barnard yesterday in response to Commissioner Helme, one by our worthy President, Commissioner Barney, and one just this morning by our Secretary, I find I think that you stole

the Wisconsin ideal, that is, the educational and constructive work.

The old method of the Wisconsin ideal was mainly to catch the culprit. Our new method is to seek the intelligent co-operation of every manufacturer, producer and dealer. We lay more stress on education than we do on prosecution. No man who offends the letter of the law through honest misunderstandings in my opinion should be prosecuted. Either the defects are the results of wrong conditions and false methods, and I believe he should be advised how to correct them and give him a reasonable opportunity to do so.

Now our policy in Wisconsin is this: First, to acquaint the people with the law. Our second point is to show them the necessity of the law and the third to develop obedience by an educational campaign. Now, I believe I am telling the truth, and the truth cannot be questioned, that the average man does not understand the meaning of the law nor its interpretation.

Every man wants to obey the Federal and State laws. The minute you show him the value of the law, and for this reason acquaint your people with the law.

The second point, show them the necessity of the law, show them how important it is to have State dairy laws, for food laws are mainly made for public health and public health is the foundation of the happiness of the people and the welfare of State. The first point is to develop obedience and you cannot do that otherwise than by an educational campaign.

In Wisconsin we have prosecuted the last two years 653 cases, that is 1913 and 1914. The fine paid amounted to about forty thousand dollars, but what have we accomplished? We have not accomplished anything, conditions are just the same as before. But we have adopted an educational campaign and the results were phenomenal last year. Every man is complying with the law and we are getting results and you cannot do it any other way than by an educational campaign. I thank you.

President Barney: Are there any other Commissioners who would like to speak on this subject?

Mr. R. B. L. Purcell: I agree with the gentleman who has preceded me in regard to the necessity for educational work. If, however, your law provides that in case of a violation of the law that after investigation he shall be certified to a prosecuting attorney in the district in which the offense occurs, I would like to know by what authority a Commissioner has the right to dismiss a violation of the law which occurred and had been brought to his notice either by his inspector or by the examination of samples which he has had made.

In my State of Virginia we have hesitated very often about reporting cases to the commonwealth attorney for prosecution and we have found that we have been charged with partiality. As a result of this condition I have made it a rule to report all cases of violation of the law to the commonwealth attorneys and let them decide whether or not the man reported shall be prosecuted.

The commonwealth attorney in Virginia has a very wide discretion as to whether or not he shall have a man brought up and tried, and in my opinion, where the laws of the State provide a specific duty to the Commissioner he has no right not to obey that law in every particular. (Applause.)

Mr. James W. Helme: I would like to ask the gentleman from Wisconsin a question for my information. In the State of Michigan we have a law that provides that the sale of oleomargarine artificially colored shall not be made. I think the Federal law provides that anybody who shall color oleomargarine must take out a license.

In the city of Detroit quite a number of people have taken out licenses to sell colored oleo in defiance of the State law. Now, I have notified all those people that they are defying the law. I have notified them what the State law is and I have done everything in my power in the line of education. I would like to ask the Commissioner from Wisconsin how he would handle them by education?

Mr. George J. Weigle: Mr. Chairman, in reply to the Commissioner from Michigan I want to say that we handle it the same way as he handles it, that is, he has educated the people in the matter but there is a persistent violation. If a man persists in violating the laws he should be prosecuted. Understand that we prosecute just the same as you do but you educated your men.

Mr. James W. Helme: I had the idea you did it by education.

Mr. J. D. Mickle: Mr. Chairman, I believe that Mr. Weigle has answered the question that I wanted to ask. I wanted to revert to some of the things that Mr. Helme asked.

My question is this: What would you do to a hotel man who advertises cream on his bill of fare and you take it to the laboratory and you find that time after time he is selling milk testing probably seven per cent? What would you do with a dairyman out in the country when you go to the place on the second or third trip and you find the housewife soaking the baby's clothes in the tank of the cream separator? What would you do when you go down to the slaughter house, after having been there several times and given the man written notice and you find that slaughterhouse strewn with offal that has been laying there for a week?

We find these conditions sometimes. I have prosecuted one of the largest creameries in my State recently on nine repeated tests over a period of one month. I found their tests from one and a half to three and a half per cent below our test. They did not need education of the kind they were looking for. We educated them through the courts and made them believe we were watching them and we will continue to educate those folks along that line in the future.

There are different kinds of education. I believe in the co-operative kind, when it will work and to that end I have sought every influence in my State to co-operate with the Chamber of Commerce in the State of Oregon, in Portland, and have worked through that avenue and secured results that could not have been secured in any other way, and that is the co-operation that works when it brings results. They come in and are willing to co-operate with us and obey the law along that line and then that is the co-operation we want.

President Barney: Now, if there is no other Commissioner to discuss this matter I will call on the trade if they have anything to say, any members of the trade.

REMARKS OF MR. A. N. McNEIL.

PRESIDENT, CHICAGO BUTTER AND EGG BOARD.

Mr. President, a few years ago a middleman coming to a meeting of this kind would feel something like Daniel entering the lions' den, but having met in conference with such men as Dr. Alsberg, Mr. Weigle, Dr. Coleman and Mr. Newman on matters of interest to the trade, we have found that we are just as safe as Daniel was in the lions' den.

It is said that men are only children grown up and we know that when the parent wants a child to do something he tells the child what he wants done, he is educating him. Some children can be led by education, can be shown the way to do things. Other children are perverse and then you have got to punish them, either by keeping them away from some things or by corporal punishment, and I think that is the way with businessmen. Some men can be led by education, they can be shown the way to do things.

Some of us are not acquainted with what the law means and when we are shown what is wanted we are only too glad and willing to do it. Others want to get wealthy by the short cut and just as long as they can get by that way they are going to do it. Such men then must be punished.

I believe that the officials should take cognizance of whether a man is doing a thing intentionally or whether he is doing it unintentionally and treat him accordingly. I believe that those men who have met with men in the trade have found that they were ready to co-operate with them. I understand that will be brought out later and consequently I am not going to touch upon it any further than to say that.

There is only one way, however. First, educate and if that does not work, prosecute and prosecute to the limit, because as the Assistant Secretary of Agriculture has said, businessmen do not want these short cuts taken by their competitors because it compels them to do the same thing to save their business.

President Barney: Is there anyone else who would like to discuss this matter from the trade? If not, we will pass to the next paper, the Report of the Committee on Co-Operation, by the Chairman, the Honorable W. Scott Matthews, Food and Dairy Commissioner of Illinois.

REPORT OF COMMITTEE ON CO-OPERATION.

BY W. S. MATTHEWS, ILLINOIS.

Gentlemen:

Your Committee on Co-operation begs to submit the following report:

The Association of American Dairy, Food and Drug Officials has adopted and readopted from time to time certain recommendations of this Committee on Co-operation. These recommendations have repeatedly been brought to the attention of the food and drug officials of the country, and it is not deemed necessary to mention those which have been complied with and disposed of finally by such compliance. But it is deemed necessary to mention those which require continuous effort on the part of officials. They are, in substance, that State and Federal officials shall keep each other informed of everything of value to each other in the administration of the laws of which such officials are commissioned to administer. The Office of State Co-operative Food

and Drug Control in the Bureau of Chemistry of the U. S. Department of Agriculture was created for the purpose of transmitting a part at least of such information to the proper officials. Much valuable information has been transmitted direct from one official to another by telephone, by letter, and by personal conferences. It is to be regretted that every instance of such co-operation cannot be repeated to you today and every man given credit for what he has done for the good of the cause in a truly unselfish spirit. Time will not permit. The Office of State Co-operative Food and Drug Control has furnished this Committee with considerable data as follows:

(Conferences between State and Federal Officials were here enumerated.)

It is recommended:

1. That one day of each annual convention of this Association be set apart for an executive session of the Association for the purpose of discussing purely administrative problems.

2. That food and drug officials notify the office of State Co-operative Food and Drug Control, of every case of a violation of the law reported to them, and of the results secured by such information.

3. That a standing committee be appointed to report at each annual convention on the court decisions handed down during the year in the way that will guide the officials in the administration of food and drug laws.

4. That state officials notify the branch laboratories of the Bureau of Chemistry with whom they are co-operating of seizures under the Food and Drug Act, instituted by them independently of the U. S. Department of Agriculture, and of the termination of such cases.

5. That state officials endeavor to establish a plan of co-operation between the State Food and Drug Departments and the City Food and Drug Departments of their respective states.

6. That the constitution of this Association be amended by adding to what is defined as the purpose of the Association, the following sentence:

"And to promote uniformity in the administration of dairy, food and drug laws."

7. That a committee of microscopists be appointed to standardize the method of counting bacteria, moulds, yeasts, and spores in sterilized foods.

8. That both State and Federal food and drug officials of this Association unite in the formation of smaller associations on a basis of community interests to study ways and means of handling local problems, and that this conference be entirely of an executive nature."

Chairman Matthews: In justice to the Association and in justice to Mr. Abbott and in justice to myself, I feel it is my duty as Chairman of the Committee on Co-operation to testify to the doctor's sincerity and effectiveness. I agree with what Mr. Abbott says and I feel as if I know it is going to result in great good. I have not the time to go into detail on the different things that have been done. Several of the states have co-operated with the government, as far as I am able to learn personally. I can truthfully say that we have accomplished a great deal of good by the co-operation of the government, and while that is true—although it may not be proper to say it—I do not think the government is quite warm enough on this proposition. What I mean is, when it comes to a question, if they are not especially interested in it, they shy just a little bit about it. Now, that is with all due respect to everybody.

I mean that is a system that is prevailing, and very properly so. Under the former proceedings every fellow was looking out for himself. I take it I am not saying this so much in the way of criticism, but it is a fact, and in saying it I hope it will have an effect. They do not go far enough, in my judgment, on the thing.

I think Mr. Abbott has done wonderful work in his department. I think he is sincere and honest and I wanted him to co-operate with me in Illinois. They co-operated fine as far as it suited them, and when it did not suit them they did not co-operate. I think co-operation means co-operation and if it does you have to kind of spread a little—you ought to co-operate. I feel, as I wrote Mr. Abbott, it is too much like heads the government wins and tails the Commissioners lose. I am serious about this and I am glad Mr. Rawl is here, because I think we ought to take it up in this way and find out.

For instance, I talked to one of the government officials about enforcing the law in our state and he said that their lawyers advised them that they could not do it. Well,

what would I do? I said I would do just as I did with the doctor I had who would not let me eat mince pie, I fired him in fifteen minutes. Now, I wish to the Lord that you would all feel like I do and get behind it and see if we can't get some different lawyers on this thing who would advise them how they can co-operate with us clear down the line.

President Barney: The discussion on this matter will be led by Mr. J. S. Abbott, of the State Co-operative Food and Drug Control Department, Washington, D. C.

Mr. Abbott: Mr. President and Gentlemen: The names on the Committee on Co-operation as put down on the program included my name when it should have included Mr. F. H. Fricke of Missouri. I am a sort of a member of the committee, that is, I am attached to the committee in a way.

On the last idea which Mr. Matthews was emphasizing, as on this question of co-operation, I agree with Mr. Matthews that co-operation should co-operate. It should co-operate for a more efficient enforcement of the law which we are charged with enforcing. In my department we are working out every year what co-operation there has been, or what co-operation has taken place. We have endeavored to do that by furnishing specific information upon that point, found in the tables in his report. It is impossible, of course, to report all the specific cases of co-operation. We have reported such as could be tabulated. If we reported in full every case I would have to hand you a manuscript of several hundred pages. I will take such a report particularly complete to the Chief of our Bureau and append to it information of this kind which unfortunately could not be tabulated and condensed in a private report to you, giving this data.

The first thing, then, we must let you know what is going on there and between whom it is going on. We want you to co-operate with us. It can not be done, however, without your co-operation and assistance in bringing such information to the office in the Bureau, as it is for your purpose.

I want to call your attention particularly to one or two of these recommendations; one in particular, namely, that state food and drug officials endeavor to establish a system of co-operation between their state departments and city departments.

I have felt that the city departments of America have a tremendous outlet for good in the enforcement of the law, particularly those that are purely of a local nature, and a large part of the work in food and drugs is of a local nature. Some states have already established working plans of co-operation with the city governments.

I also want to emphasize another recommendation, and that is that the state officials and Federal officials endeavor to organize in small units throughout America those little groups of states that have a common interest in working out vital questions that affect those particular localities; there one may be working condemning bad oysters throughout the South; another one may be trying to work out things affecting a certain particular locality or territory. The officials of that particular territory are naturally interested in carrying out the work; the others may not be.

I believe the country should be studied carefully with reference to the production of the different localities, and a common interest in the different territories, of course, is for your serious consideration in the future.

There is another recommendation that I should like to emphasize, and that is the recommendation that there be a committee of this Association to report at each annual convention on the court decisions handed down during the year, looking toward the enlightenment of the officials in a way that will assist them in the proper administration of the Food and Drug laws of the country.

I want to say, and I want to say it without any apology, that it was not indicated in the committee that I should be the chairman of this committee, and hence I am saying this on my own resources, and no one is subject to any criticism except myself:

It seems to me that it would be proper—before I say that I want to say that I realize that it may not be in good taste for me or the committee or any one else to suggest who should be appointed on any committee. That should be left to the executive officer in whom we have confidence, of course.

That is all right, but my suggestion is not intended to have any weight whatever with that officer, but it is my judgment that the Solicitor of the Department of Agriculture would be a very proper permanent chairman ex-officio for such a committee. The reasons for that are, I think, plain. He is the one legal officer who advises perhaps on a greater volume of work than any other individual officer of the country and

I have the thought that he would be a very good man for that.

Now, that does not mean that you can't put just as many other people, make just as permanent a committee as you want to with an active man on such a committee, but he was to be a sort of a chairman ex-officio and other states that have lawyers in their department, of course, can make up the committee.

There is one other recommendation I want to emphasize and that is that a Committee of Microscopists be appointed to standardize the method of counting bacteria, yeast, moulds and spores in sterilized food. We have an Association, O. A. C., for testing the methods of chemical analysis largely. There may be associations of bacteriologists.

Of course, the American Medical Association has a committee working on the standardization of methods of analysis along bacteriological lines, but so far as I know there is no organization in existence for the purpose indicated in this recommendation. It seems to me to be an important one. I am led to this conclusion by the fact that by virtue of the position I have had occasion during the past year to see the results of examinations of this kind and the variations in the results.

I think there is a big field here for work because it pertains particularly to sanitation, sanitary food control, and apparently it is an unexplored or a non-systematized field. I thank you.

President Barney: I want just to make an announcement. We have, by arrangement with the Parke Davis people, a matter that will necessitate our adjournment just as soon as the announcements are made and we will take up for discussion tonight in Section A the balance of this matter. It is twenty-five minutes after twelve now and we have the announcements to make and we will be obliged to defer the discussion further of this matter until tonight.

Mr. G. G. Frary: Mr. Chairman, I was going to make a motion to that effect except that I understood that the meeting tonight was an executive meeting and the trade will possibly not be in attendance and if we can have the session of the trade at this time and the discussion of the Commissioners this evening, I think it would be a good idea.

President Barney: It is absolutely impossible to put in any further time now because the automobiles will be waiting out here at 1:40 and they are not permitted to stand on the street or wait for us.

Mr. G. G. Frary: Is the session this evening to be an executive session?

President Barney: I think it will be an executive session. I will have the Secretary make these announcements and we will adjourn then.

Secretary Newman: By previous arrangement with the Parke Davis Company, through their kind invitation, all members and delegates with their wives and the trade people, people wearing badges, are invited to be the guests of the Parke Davis Company this afternoon and we will have autos to convey us to the plant and we will be taken through the plant and light refreshments will be served.

We will then be taken over to Belle Island. They are engaging a large number of automobiles to convey us and, as the President said, they are not allowed to stand on the street, and as a matter of courtesy we should be there at 1:40.

We are also invited to go through the Ford plant Thursday afternoon, as many of us as care to go.

President Barney: We will stand adjourned until eight o'clock tonight to meet in this room.

FOURTH SESSION.

TUESDAY EVENING, AUGUST 8, 1916.

President Barney: Gentlemen, if you will please come to order we will take up the discussion of Mr. Matthews' paper, but first, I think we will hear from Dr. Abbott.

Mr. J. S. Abbott: We were all considerably hurried today and therefore did not have the time to discuss all of these points that were recommended. The recommendations made in the report will be printed in the record and, of course, you will all have an opportunity to read them over carefully, but what I want to try to point out is the fact, as Mr. Matthews indicated in his talk, that I had gotten up all this data and I want to apologize for not having more data. In so far as I did have it, I tabulated it to keep it from making a bulky report, and if any of the Commissioners feel that I forgot to put anything down there concerning co-operation in their states that I should have put in, I am

willing to be jacked up about it, because I intended to get everything in that report that belonged there.

There is one point that I want to mention that I did not, and that is with reference to co-operation. It is more in the nature of co-operation in general than it is in the form of any particular recommendation. It has been said to me that somebody, that some state man, for example, has got the impression that we want the state people to enforce the food and drug act. Of course, there never was a greater mistake than that. In the perfection of the Manual of Procedure for the Guidance of State Food and Drug Officials, who wanted to use the drug act, there was not any thought of that kind in our mind.

The point I wish to emphasize is the course provided for the enforcement of the Federal Food and Drug Act by two distinct organizations: One is the U. S. Department of Agriculture and the other is the State Food and Drug Departments of the several states. In my traveling around among the officials I find taking evidence apparently has never been given thought right strongly by the state officials. The state official has just as much right and authority to take evidence of the violation of the Federal Food and Drug Act directly to the United States Attorney, for the institution of appropriate proceedings for violations of the act as the United States Department of Agriculture has.

We have understood that there would be many of the state officials who would desire to use the Food and Drug Act, independent of the United States Department of Agriculture, the giving back to us, or submitting us any information or any evidence, and that has been the reason for the preparation of this little outline of procedure which we thought would be helpful to the state officials who had occasion to use the Food and Drug Act, and not from any desire to put that enforcement of the Food and Drug Act upon the state official.

In this connection I may say that some state officials have used this act in a very beneficial way to their state. Mr. Purcell of Virginia has made five or six cases this year on his own initiative, taking evidence directly to the United States Attorneys.

When it was not found feasible or practical to refer it to us, or for us to get a man on the job, Mr. Rose of Florida put through thirteen cases in that connection.

Mr. Watson of South Carolina put through six cases and on that account, even though there have been many reported to us, there are many others that sought independent action, so I can not see if the spirit of Congress is carried out, as indicated in Section Five of the Food and Drugs Act, will ever become what was raised as an objection to it, when the thing was up for passage years ago; that the enforcement of the Food and Drugs Act would be a one-man proposition, or a one-department proposition, but if state officials do attempt to use the Food and Drugs Act, and do use it, what we have got to do, of course, is to make it just as easy for them to do it as possible and to promote as much uniformity in such use of it as possible.

I wish I had not forgotten that today when I could have brought that up to the attention of the Commissioners. I think that is about all I have to say, as I do not care to take up more of your time.

Mr. Frank H. Stadtmueller: I would like to ask Mr. Abbott a question despite the conditions of the Federal act making it permissive for Commissioners to bring the case direct to the United States, if the ultimate effect will not in most cases be better if the case is prosecuted through the Department at Washington? What causes this question is the experience that I have had in the state of Connecticut, which *per se* the District Court through the United States Attorney, without referring the evidence, condemned the property and the most that could be accomplished was the seizure and condemnation of the goods in the state of Connecticut, and the real violator would go scot free, except such as resulted between the shipper and the manufacturer, and so, therefore, as a result of my experience, I have reached the conclusion that wherever possible, it is infinitely better to bring the case through the Federal authorities, when the violator may be reached and may be penalized more than would result through the seizure of a few cases of goods. Am I right, Mr. Abbott?

Mr. J. S. Abbott: Yes. That raises a very important point that should be well taken I think. It is not practical for state officials in Virginia, for example, to start a prosecution over in Illinois, against a shipper in Illinois shipping goods into Virginia. It is not impossible, of course, but it is much easier for the Virginia official to give us the evidence and let us take it to the United States Attorney over in Illinois

and start the prosecution there. That is against the individual, mind you.

There is another provision in the Federal law, and that is for the prosecution or arrest of the goods, and, of course, that is a matter that the state man can handle, because he finds it in his own jurisdiction and he can take it to the United States Attorney in his own jurisdiction.

That is where we want to co-operate and help. If the state official finds information in his state to the effect that some man outside of the state is violating the Food and Drugs Act, and will give us information we will go back outside of his state and start the court machinery to bear upon that man that is really culpable.

If I may say one more word upon this point, emphasizing the features that Mr. Stadtmueller mentioned: I was in one of the states not long ago and the state official was prosecuting one of his local dealers for the sale of some syrup that he had received from a man outside of the state, I mean that had originally come from outside of his own state.

It appears to me in that sort of a case that the state official was prosecuting his own people who, perhaps, were not culpable, as they did not know of the violation of the law, and the man who was really culpable lived outside of the state. If we could have had that information of the violation of the law, with the chemist's analysis and with the proof of the interstate sale and delivery, we could have gone back to the United States Attorney having jurisdiction of the man that was really culpable and brought the law to bear upon him. That would have saved the state official from prosecuting his own people, and perhaps innocent people, by visiting prosecution upon the man that was really culpable.

Mr. Y. M. Moore: I would like to ask Mr. Abbott a question: In cases where an outside shipper ships stuff into the state in violation of the state law and it is not a violation of the Federal law, I would like to ask, isn't it a fact that we can not handle that kind of a case except through the dealer?

Mr. J. S. Abbott: Yes, that is true.

President Barney: It has been suggested to the Chair by several members that by hurrying our program along we might be able to finish by Thursday evening. We are right up to time; in fact, I believe we have had one paper that is on the program for tomorrow, so I believe if we would hurry along just a little we will be able to close Thursday night.

This meeting will now be adjourned for Section A and Mr. Jackson will take charge of the meeting.

FIFTH SESSION.

WEDNESDAY, AUGUST 9, 1916, 10:00 A. M.

President Barney: I desire to say that the Chair wishes to act in strict accordance with the by-laws, and we find that there is a provision in the by-laws whereby resolutions coming before this convention, the man presenting them will be given five minutes on the floor to explain his resolution and then it is referred to the Resolutions Committee. There is to be no debate on the floor on resolutions.

Now, the Secretary has some announcements to make.

Secretary Newman: Mr. President, the program is being changed for the accommodation of quite a few people who are here today and can not be here tomorrow and for one of the speakers. Dr. Tolman's paper, the report of the Committee on "Swells and Springers in Canned Goods," assigned the last item tomorrow afternoon, will follow Dr. Caspari's paper this morning, and the "Demonstration of Sterilizer for Farm Utensils," by Dr. George B. Taylor, Market Milk Specialist, Dairy Division of the Department of Agriculture, on for the second item tomorrow afternoon, will come on as the last item this afternoon. Dr. Taylor has to be back in Washington and we are changing the program to accommodate him.

Mr. Jones of Alabama: Mr. President, I wish to introduce a resolution. (The Secretary read same as follows):

"WHEREAS, During the progress of this convention, as well as in other sessions of this organization, attention has been directed to the lack of adequate inspection of dairy products entering into interstate commerce, and to the necessity of devising more effective methods for the safeguarding of the public health from the dangers of these unwholesome foodstuffs; and,

"WHEREAS, It is not right that the Federal Government should permit this large volume of disease-carrying products to be poured into the channels of trade without restraint; and,

"WHEREAS, The leading food and dairy journals and

health officials throughout the country declare that large quantities of these dairy products entering into both domestic and foreign commerce are made from the milk of diseased cows and from milk that has been allowed to stand in unsanitary vessels and under unsanitary conditions until it has become soured, often putrid and otherwise contaminated and unfit for human food; that such dairy products are among the active agents in the spread of infectious diseases, and are therefore a menace to the general public health; and,

"WHEREAS, By skillful manipulation with neutralizers and with the aid of coloring matter, these unwholesome dairy products are put into such attractive forms that the mass of consumers are unable to distinguish such from wholesome products; while by further manipulation butter makers are able to incorporate excessive amounts of water, salt and curd so as to keep within the prescribed limit of 16% moisture and at the same time reduce the butter fat far below the standard of 82½%; and,

"WHEREAS, In the absence of proper and adequate inspection, dishonest producers are able to get into their plants all kinds of unmarketable rancid butter, low grade, uninspected fats and oils, and incorporate same into their product, and sell the greatly increased output beautifully colored as and for butter, with but little chance of detection, thereby greatly endangering the public health, destroying the faith of consumers in all dairy products and creating grossly unfair competition with the honest creamery man and butter maker; therefore,

"BE IT RESOLVED, That Congress be urged to enact and put into operation, through such department as may be deemed best, some adequate plan of inspection and regulation of the manufacture of all dairy products entering into interstate and foreign commerce, to the end that the general public health may be conserved and the honest manufacturer be protected from fraudulent operations."

Mr. Jones: Mr. President, inasmuch as the preamble of this resolution is self-explanatory and the convention has a great many important things to transact this morning, I wish to waive my right to explain that resolution further.

President Barney: I have a report from our Vice-President, Mr. Rose, that we will hear at this time and then I will ask Mr. Rose to take the chair.

Mr. R. E. Rose: It is only a formal report of the Auditing Committee that we have examined the books and accounts of the Treasurer as reported to the convention and find the same correct.

(The report of the Auditing Committee was here read by Mr. R. E. Rose, the Chairman, and is as follows):

REPORT OF AUDITING COMMITTEE.

Your Committee on Auditing beg to report that it has examined the books and accounts of our Treasurer and find the same correct as reported to the Commissioners.

(Signed R. E. ROSE, Chairman.

HEBER C. SMITH.

President Barney: What will you do with Mr. Rose's report?

Mr. W. W. Randall: I move the adoption of the report. Motion seconded.

President Barney: It is moved and seconded that the report be adopted. Is there anything to be said upon the question? If not, those in favor please say "Aye." Contrary "No." It is a vote and the report is adopted.

(Here Mr. R. E. Rose of Florida took the chair.)

Chairman Rose: The first paper, gentlemen, is a report of the Committee on Drug Deterioration, by Dr. Caspari, Jr., of Maryland. Is the doctor present? Dr. Randall, I understand, is representing Dr. Caspari here and will read the paper.

Dr. W. W. Randall: I want to say in explanation, Mr. President, that Dr. Caspari being unable to come, asked me to bring a copy of the paper which he had prepared and which I delivered to the Secretary. I also sent a copy to Dr. Francis for his examination. I personally have no copy of the paper in my possession.

Secretary Newman: Get Dr. Francis' copy and read it.

The Chairman: Is Dr. Francis here? It appears there has been a miscarriage of mail or a loss of a paper. Dr. Francis is here prepared to discuss Dr. Caspari's paper, I understand, and the suggestion has been made that we delay this particular discussion and take up the report of the Committee on "Swells and Springers in Canned Goods," by Mr. Tolman, as suggested by the President. What is the wish of the convention?

Mr. F. H. Stadtmueller: Mr. Chairman, I move that we proceed with the paper of Dr. Tolman.

The Chairman: Is Mr. Tolman here? As there appears to be an accident in this instance the Chair suggests that the address on "Malnutrition Through Errors in the Combination of Foods," by Professor E. V. McCollum of the University of Wisconsin.

MALNUTRITION THROUGH ERRORS IN THE COMBINATION OF FOODS.

BY PROFESSOR E. V. MCCOLLUM,
University of Wisconsin.

Mr. President, Ladies and Gentlemen:

The inclusion in the program of this meeting of officials whose duty it is to promote such legislation and endorse such laws as may best protect the public health, a symposium on devitalized foods is significant in indicating that the committee which planned the program believe that a new era in food legislation and control is approaching when something more can be done than at present to guarantee the physiological well-being of the consumer of foods which are handled commercially.

The results which you have already attained in establishing better practices in the handling of dairy products, meat and eggs have been of incalculable benefit to the public. There is much evidence that there is an earnest desire among intelligent people for more knowledge about foods, and with the public in a receptive mood it is desirable that further legislation for the control of the character of food products should proceed along those lines where we are certain good can be accomplished.

I accepted the invitation to speak to you today because it gives me an opportunity to describe to you some viewpoints regarding foods and nutrition which I have come to hold as a result of very extensive experimentation over a period of nine years. I hope that what I have to say will serve to clarify in some degree this most complex and many-sided subject.

The text-books on nutrition up to very recent times enumerated protein, energy in the form of carbohydrates and fat and inorganic salts as the essential factors which operate to make up a successful diet. It has been repeatedly stated by successive investigators during the last twenty-five years that food mixtures made up of purified food constituents, but complying with all the requirements which the chemist could suggest, failed utterly to maintain the life of the experimented animals.

The cause of failure was variously explained. One said phosphorized proteins only could meet all the protein requirements of an animal. Another suggested that a supply of lecithins, the phosphorized fats, or the peculiar lipoids known as cholesterol, must be supplied by the diet, and still another that organic forms of iron were indispensable from the diet.

Actual tests of purified food mixtures containing these complexes, singly or collectively, failed, however, to give any better success in inducing growth or maintaining the health of animals than did the simple mixture of protein, energy-yielding foods and salts.

Without dwelling on details of history, it may be said that it became evident through the investigations of Fischer and Abderhalden in Germany that the proteins differ greatly in their yields of the different digestion products, the amino acids, and later studies of Osborne and Mendel of New Haven have made it clear that there is as great difference in the nutritive value of the proteins as in their content of amino acids. Their experience as well as my own have shown that there are poor, medium and good proteins, depending on the source from which they are derived. After several years of effort directed toward finding why animals did not thrive on a food mixture of purified substances, Miss Davis and I found that there must be present in the diet two as yet unidentified substances, or groups of substances the chemical nature of which is still unknown, in addition to the well recognized constituents of the diet, protein, energy-yielding substances as carbohydrate and fat and a suitable content of inorganic salts.

One of these dietary factors is found in butterfat, egg fats and the fats from certain animal tissues, as the kidney and liver, but is present in the reserve fats of the body in very small concentration. It is found in the cereal grains, but in amount too small to supply the needs of a growing animal in all seeds which we have examined. The leaves of plants, among which we have examined alfalfa and cabbage, contain much more of it than do the grains. Twenty-five per cent of alfalfa flour in a ration otherwise satisfactory will supply all of this substance, which we have provisionally called the fat soluble A, necessary to promote growth at the maximum rate. The fat soluble A appears to contain neither nitrogen nor phosphorus, for butterfat which contains but the slightest traces of these elements is highly efficient in inducing growth.

It is of interest to note that although we have examined a long list of the more important fats of plant origin, we have not yet found one which possesses the growth promoting properties of the animal fats listed above. This depends on the fact that, although the substance is in the plant leaves and other parts in smaller amounts it is not extracted with the fats by the use of fat solvents. It appears to be in chemical union in the plant, in a form not soluble in fats or ordinary fat solvents.

The second unidentified dietary factor is apparently never associated with fats. It can be obtained from many natural foods, such as the cereal grains and apparently the leaves of plants in general. It is always present in the extracts which induce a cure of experimental beri-beri in pigeons, brought on by a diet of polished rice.

There is reason to believe that the same substance is concerned in the cure of this condition and in the promotion of growth in young animals by the addition of water or alcoholic extracts of certain natural foods. This substance has been recognized for several years by students of the disease, beri-beri, but our own work was the first to deal with it in its relation to normal growth. This is the substance which Funk,

Voegtlin and others call a vitamine, but in reporting my own work in the scientific journals I have termed it the "water soluble B," preferring to give it an appropriate chemical name when I know more of its chemical nature.

Rations made up of purified foodstuffs, to which three to five per cent of butterfat and an alcoholic extract of five to ten per cent of wheat germ have been added, are perfectly adequate for growth and reproduction in rats. With either the extract or the butterfat left out there is no growth, and an animal cannot long remain alive.

Having determined by working with the ration of purified foodstuffs the factors which operate in making a ration satisfactory, we began an inquiry into the nature of the dietary deficiencies of certain of our more important natural foodstuffs. Our study of wheat has covered nearly a decade, and is more complete than that of any other grain. We have shown by many trials that whole wheat alone does not induce any growth in the rat or the pig. Neither can an animal so fed live beyond a few months. Now the cause for this failure must lie in (a) the poor quality of the proteins, (b) an unsatisfactory composition or a deficiency in the amount of the inorganic content, (c) a shortage of the fat soluble A, (d) a shortage of the water soluble B, or (e) to presence of something toxic in the wheat

suffice to maintain life, much less to support growth. The same is true of oats, the third most important cereal grain employed as food for man.

When confined to the oat kernel as the sole food, young rats lose weight slowly and die. In the case of both corn and oats the proteins are qualitatively adequate for growth, but their quality is rather poor. When the other factors which operate to make a satisfactory ration are properly supplemented the proteins of either of these grains can support growth at nearly the normal rate for a considerable time. Both grains are similar to wheat in that they lack a sufficient content of the fat soluble unknown dietary constituent to induce growth at the maximum rate.

We have been greatly surprised to find that in a large number of attempts we have been unable to find any mixture of grains which will induce normal growth in the rat even for a short time. The combinations of the grains with the forage portion of the plant is necessary in order to properly nourish an animal on a diet derived solely from vegetable sources. Alfalfa leaves contain a liberal content of both the unknown dietary factors and the inorganic content of the leaves of plants is in many cases of such a character that it supplements the weaknesses of the inorganic mixture of the grain.

Those species of animals which are anatomically fitted for the consumption of large amounts of forage plants can live and thrive on the grasses and legume hays alone. The forage portion of the plant possesses dietary properties which cannot be detected by any chemical means at our disposal, which properties are not found in the grains so far as we have been able to discover.

I have been able during the last two years to so make up the diets of rats that there was early failure of nutrition and in a series of experiments have been able to point to a single dietary factor and to each of the factors I have enumerated, the protein, the inorganic content, the factors A and B being singly the sole cause of the failure.

One of the points which I wish to make clear to you as a body of food officials is this: We have read a great deal in the recent past about the evil results of eating the highly milled products, such as bolted flour, degerminated and decorticated corn meal and polished rice, and with much justice, for the consumption of undue amounts of such foods is doubtless fraught with danger.

There has been a strong tendency, however, for the authorities who give us this warning to pass on and speaking authoritatively on a matter on which they were not well informed, dwell on the wonderful health promoting properties of the whole grain. What I wish to emphasize is that any of the ordinary grains are so constituted as to make, singly or collectively, an inadequate diet for the mammal during growth, and the practice of lauding a grain as an ideal food because it constitutes nature's unbroken package, is misleading.

It is rather a case of the preparation during milling of products which are somewhat poorer foodstuffs than the grains from which they were prepared. A large part of the mineral content of the wheat or corn or rice kernel is discarded and the depleted portion is the part employed as human food. The germ in all grains appears to contain proteins which are of better quality than those of the reserve proteins of the endosperm, and the germ is discarded. The two as yet unidentified substances which the diet must supply are, so far as my observations have gone, largely concentrated in the germ.

We should fully understand, therefore, that successful nutrition is to be attained only through the proper combination of foodstuffs. In making combinations of the natural foods it should be fully appreciated that each of the essential factors of the diet is as important as any of the others, and the tendency in recent times to attribute extravagant values to the as yet unidentified essentials of the diet which have been termed accessory substances, growth determinants, vitamins and exogenous hormones, and which I have referred to as the unknown A and B, until we know more of their chemical properties.

It is time to warn against the widely heralded teaching that the several diseases recognized as of dietary origin, such as scurvy, beri-beri and possibly pellagra are necessarily due to the absence or to an inadequate supply of "vitamines." The unidentified factors A and B are indispensable and their shortage in the diet will lead to disastrous results. We should remember, however, the importance of the other factors of which I have spoken, and in considering the stand to be taken with respect to the milled products, keep in mind that the grains from which they are prepared are themselves singly and collectively as they come from the hand of nature, incapable of supporting the health of an animal during growth. We have recently carried on an extensive investigation to determine the possibility of attaining normal nutrition on a diet strictly vegetarian in character.

The earliest well-planned effort with which we are familiar to test the adequacy for growth and maintenance of mammals, of a vegetarian diet of wide variety, was made by Slonaker. He fed a group of rats on a strictly vegetarian mixture, which included not less than twenty representatives of naturally occurring foodstuffs and afforded as great a variety as the human vegetarian in California would be likely to have on his table.

Another group which served as controls received the same diet and in addition a small amount of meat two or three times a week. The diets were adhered to from the age of one month to the end of life and careful records were kept of the rate of growth and the degree of activity of all the animals. The vegetarian rats were frail and weak and showed extreme lassitude and indifference.

The omnivorous controls were the reverse in all respects. They had an average span of life of 1,020 days as compared with 555 days for the vegetarians. Slonaker concluded from a review of the literature relating to the subject on man and animals that similar results would be obtained if man were subjected to a strictly vegetarian regime throughout his lifetime.

Our own experiments in which rats were fed a wide variety of vegetable foods confirm in all respects the results of Slonaker. We did not attempt to keep our rats beyond the age of six months since our interest lay in their ability to make such a choice of foods as would best meet their nutritive requirements.



PROF. E. V. McCOLLUM.

kernel. Obviously more than one of these factors may operate together to produce the observed result.

By a systematic procedure we have fed to different groups of young rats the following rations: (1) Wheat and suitable salt additions which made the mineral content of the mixture similar to that of milk; (2) wheat and a purified protein, casein; (3) wheat and butterfat to furnish the fat soluble A; (4) wheat salts and protein; (5) wheat, salts and butterfat; (6) wheat, butterfat and casein; (7) wheat, salts, butterfat and casein.

Rations 1 to 3 do not support growth, rations 4 to 6 all induce a moderate amount of growth. Indeed, the animals may grow at nearly the normal rate for a time, but they never attain the full adult size, and never live more than a quarter of the full span of life for the species. Ration 7 on the other hand is complete. It supports growth to the normal adult size and also reproduction and rearing of the young. They were normal in every way.

Unpolished rice is closely similar to wheat in that when supplemented by pure protein, butterfat and a suitable salt mixture it makes a complete ration. Polished rice on the other hand is not supplemented by all three of the above additions so that it will induce growth. It lacks the unknown dietary factor the water soluble B and only when supplemented by protein, salts, fat soluble A and an extract containing the water soluble B does it form a complete ration. When any one of these additions is omitted early failure of the nutrition of the animals will result.

It is not yet possible to give a complete account of the nature of the deficiencies of each of the more important grains employed as human food. We have, however, fully established what the experiment station literature has long indicated, viz.: that the corn kernel as a sole source of nutriment does not

The rats received corn, wheat, oats, rye, cooked beans, green peas, wheat embryo, corn gluten, and wheat gluten, flaxseed oil meal, green clover and green alfalfa, onions and peanuts.

Like Slonaker's rats, they grew at about half the normal rate, but ceased to grow after the first ninety days. They appeared to be in a fairly good condition for a time thereafter, but were, of course, pignies beside normal rats of the same age. One female even produced young, and did the best she could to suckle them, but at ninety days of age they weighed but 35, 39, 39, 61 and 36 grams respectively. They should have weighed over 100 grams.

It is safe to say in the light of results which were secured in this experiment as contrasted with those more recently obtained with certain simple vegetable mixtures in which no choice was permitted, that the instinct of the rat is not a safe guide to the selection of foodstuffs.

It is of great interest, therefore, to observe the feeding a mixture of two of these ingredients, either of which alone fails to support growth or maintain well-being in the rat. Nutrition approaches the normal expectation when rats are fed a simple mixture of alfalfa flour 40 and polished rice 60 per cent. Two rats, a male and female, reached 83 and 80 per cent of the weight normal for the adult and are still in good condition after ten months on this diet. Two litters of young were produced by the female but were not reared.

There is practically complete nutrition of rats fed on a monotonous diet of ground corn (maize) 50, alfalfa flour 30 and peas 20 per cent. One female has produced three litters of young during the first ten months on this diet and has successfully reared two litters. Her daughter, which never had any other food except that on which the mother had lived, grew to normal maturity and has brought forth a litter of young and successfully reared them, the young appearing perfectly nourished at the present age of twelve weeks. They have been confined to the same mixture which nourished their mother and grandmother.

Our practically complete success in the nutrition of rats with strictly vegetarian diets made up of but three natural foodstuffs, and the failure attending the employment of a wider variety in the food mixture emphasizes the fallacy of the assumption that the safest plan to insure perfect nutrition is to include a wide variety in the selection of the constituents of the diet. So long as definite knowledge is wanting concerning the specific nutritive properties of the constituents of the diet, variety will unquestionably make for safety, but will not by any means assure safety, and indeed can scarcely secure the optimum result in any considerable per cent of cases.

As soon as we possess an adequate knowledge of the specific properties of our natural foodstuffs and their supplementary relations to each other, it will certainly be possible to compound fairly simple and monotonous diets which can be depended upon to induce physiological well-being closely approximating the optimum.

The conscientious adherence to a vegetarian diet by one who has no technical knowledge regarding the subject of diet appears to be fraught with danger, since among the foods of vegetable origin, ordinarily consumed by human beings, several dietary factors are as a rule of an unsatisfactory chemical character. It is certain that all of the components of a successful diet are present in foods of plant origin.

I have said enough to make it clear that the advice now so frequently given, to regularly include in the diet a moderate amount of meats, milk and eggs, is wholesome advice. These are foods of an excellent character in those respects in which the grains are unsatisfactory, and their use in combination with foods of vegetable origin makes for safety. Indeed, variety makes for safety, but it does not by any means insure safety. We shall attain the optimum results in human and animal nutrition only when we have acquired a fairly complete knowledge of the specific dietary properties of the natural foodstuffs and the degree to which the deficiencies of one are made good by another which is combined with it.

It seems to me highly undesirable that we should raise a cry of alarm against the use of milled products and canned goods on the ground that they lack vitamins. I freely admit that such products may be deficient in certain respects from the dietary standpoint as compared with the fresh product. We must remember that there are practical difficulties in the way of supplying the year through fresh, wholesome natural food products. There is no reason why if it be necessary for the purpose of storage without commercial loss to polish rice or to mill wheat or corn or to can fruits and vegetables, the public should not make use of fairly large amounts of what the agitator of the present is prone to call devitalized foods.

The point to be remembered is that like most of the natural foods of vegetable origin, they must be judiciously combined with such things as make good their deficiencies. The diet is a complex thing, and we are just now in possession of an adequate working hypothesis regarding the essential factors which operate in inducing normal nutrition. The incomplete foodstuff, as a milled product, may be a perfectly wholesome food so far as its content of carbohydrate and protein are of value and its contribution of inorganic elements good so far as they go.

If economic reasons make their preparation necessary we should accept them with a full appreciation of their value as well as of their shortcomings.

In closing, let me repeat that successful nutrition is not assured by the consumption of the foods just as they are supplied by nature. It is to be attained only by the judicious combination of foods with a knowledge of their dietary properties.

The Chairman: Gentlemen, I need not say that the convention has appreciated Professor McCollum's discussion of this very important and interesting subject, and I would suggest, as he suggested, that if there are any questions you wish to ask we will have the questions in place of the discussion at the present time. Are there any of the Commissioners or the trade who care to question the doctor? If there are we would like to have the questions asked.

Mr. William Frear: Mr. Chairman, I would like to ask one question. I am impressed with one of the latter state-

ments of Professor McCollum relating to substitutes for egg fat and milk fat, whether supplied as butter or milk by other animal fats. Of course, many individual adults do not drink milk, some do not even take milk in association with other foods because of some personal distaste, or use butter, yet individuals I know whose dieting habits are of that kind seem to be in normal health. They do eat eggs, however, and that may account for it.

For many, however, eggs are very expensive. It is probably not nearly so expensive when one buys by the dozen compared with meat by the pound, but the question is whether the ordinary meat fat will be eaten, very largely, for example, by our farm population curing their own pork, especially non-dairying farmers. Others will use fat of beef or fat of butter. Prof. McCollum was not very specific on this point. I wanted to ask whether he had any of these food combinations compared with the substitutions of these fats from other parts of the body than the mammary glands and the egg, to determine their sufficiency for the supplying of the unknown A.

Professor McCollum: With respect to that point I may say this: you can include as much as twenty or twenty-five per cent of lard in a diet otherwise made up of pure foodstuff plus a little alcoholic extract, but you will not have enough of the A to make a young animal grow.

On the other hand, you can take tallow, for example, and that would not make it grow either. But Dr. Osborne and Dr. Mendel, who have also been doing work along the same line, took tallow and melted it and then cooled it and crystallized it until they had a little bit of the softer portion of the fat in a liquid state. They filtered off the liquid portion of the fat and fed it, and they found it was better as a source of the unknown A than tallow. The active principle was concentrated in the liquid portion of the fat.

They fed the solid crystalline part and did not get growth. I have not repeated that, but I have no doubt whatever that the results were perfectly reliable. It is in harmony with all our experiences. I will say, however, that I doubt whether there is any difference between lard and tallow. Our lard contains relatively much more of the softer fats and relatively little of the hard fats. We can't make that separation in the way that they have in tallow and get a small amount of liquid fat. You can not concentrate the thing. It is out of the question at the present time to make any direct quantitative comparison.

You take the extract of corn and fat foods in the same rations and they will not grow. Take a third group in the same ration but unincorporated with the ration ether extract and residue and you can not make them grow. In other words, this seems to be, in the light of what I know, the working hypothesis that in the plant your unknown A is in chemical union or not soluble, in which form it is not soluble in ordinary fat soluble and therefore it does not come out with the plant fat. In the course of digestion and absorption, either in digestion or in the walls of the intestinal tract, that union gets broken apparently and then the physiological active thing being very soluble in fat accompanying the fat in the animal body.

The animal body fats have it, therefore, in a dilute form incomparable to the grain corn or wheat, or they have the A, but in too small an amount.

There is a mechanism in the lactating animal which puts a lot of this thing in, but it is not enough when it is not in the diet of the mother. For example, I have tested a series of animals. You take a female rat and put it on a perfectly good ration until the day she has the young and then feed her a diet which is perfectly adequate except for A, and see what she does to bring up the young. You will see they grow a little, but she loses weight very rapidly here and she never weans them, and they are not more than half the size they ought to be when weaned.

But you put in the A and leave your B and she will do the same thing, she can not wean her young. If you put in both A and B and put in protein the results will be satisfactory. That I might say will be described in the Journal of Biological Chemistry for October.

Mr. R. H. Bond (McCormick & Co.): Are these vitamins, as you term them, changed by cooking in any way? That is one question. The second I would like to ask is this: In your experiments, which have been very numerous, extending over a long period of time, have you found an ideal ration that would increase the normal size of the animal to the abnormal?

Professor McCollum: Regarding the first question I may say that I do not term them vitamins, as you state. I have

not added very much to what is known about that. It has long been known that Dr. Funk and Dr. Williams and Dr. Voegtlin and others have all demonstrated with inactive solutions you can heat. I want to take exception to your saying that I term them vitamins. That is what I do not do. The thing that cures it which is the being in a solid solution will stand a very considerable amount of heat. You can boil such a solution for a time and it is still more or less active. It probably loses its activity slowly and progressively.

In neutral solutions there is one thing or a half a dozen things, I do not know whether it is one thing or a group of things and nobody else knows, in the neutral solutions the destructions occurred much more rapidly in alkaline solution. These physiological properties of the subject are too long. In regard to the A you can take butter fat and pass live steam through it for two hours and a half and you get just the same result as without heat at all.

The Chairman: I want to know if Prof. Willard is present. He was to have led this discussion. I would like to know if Prof. Willard is here.

Mr. T. L. Calvert: I have been very much interested in the professor's talk right along this line in experiments that we are making down in Ohio, and I would like to ask him a question, and that is, whether you have ever made any experiments with skimmed milk and vegetable fats in the form of cocoa oil?

Prof. E. V. McCollum: I have made no experiments whatever with cocoa oil. We have experimented with nearly all of the vegetable oils but not the cocoa oil. I may say, however, as regards skim milk, that skim milk contains enough of the A to make animals grow for three or four months if you supply no more of the factor of A than is contained in skim milk. You will fall down very greatly during the early growth period. For that time there is enough of it to carry it over, but you will fall down, however, in the length of life and in the manner of reproduction unless you get more of it. You see you have got to keep them under your eye to do this. It is by no means a simple matter to take care of these animals and keep them under such hygienic conditions all the time that you can say that failure to reproduce or failure to rear the young was due to the chemical character of their diet and not to some other factor by which we are endeavoring to achieve results.

Chairman Rose: The discussion has covered a considerable amount of ground and we have some other papers for the morning's program and I would suggest that there is a paper along similar lines on vitamins this afternoon by Dr. Alsberg, which will bring up this subject again, and if there is no objection I would ask for the paper from Dr. Caspari by Mr. Randall. Mr. Randall, gentlemen, will read Dr. Caspari's paper on the subject of Drug Deterioration. This paper is to be discussed by Dr. Francis of the Parke Davis Company.

REPORT OF COMMITTEE ON DRUG DETERIORATION.

BY DR. CHAS. CASPARI, JR., MARYLAND.

Mr. President and Gentlemen of the Convention:

Your Committee begs leave to submit the following somewhat fragmentary report, showing the condition of crude drugs and their preparations offered in different parts of the country during the past year, and at the same time regrets to say that its efforts to secure more complete and satisfactory information were unsuccessful, because it was impossible to obtain returns from a large number of the states. The control of drugs in several of the larger states is not in the hands of the Food and Dairy Commissioners, and it was impossible to secure the desired information from other sources. Special acknowledgment, however, is gratefully made of the data furnished by the Food and Drug Departments of Connecticut, Georgia, Kansas, Maine, Maryland, Michigan, Minnesota, Montana, South Dakota and Wisconsin.

Inasmuch as it seemed desirable to confine our report to conditions existing during the twelve months from July 1, 1915, to July 1, 1916, it is unfortunate that some valuable information to be submitted later, is not available at this time. Special attention is called to the comprehensive reports made annually to the American Pharmaceutical Association by its Committee on Quality of Medicinal Products, and we should have been glad to incorporate abstracts of their 1916 report in this paper, but as the American Pharmaceutical Association does not meet until September 5, the committee's report could not be obtained in advance of the meeting.

It appears to your Committee that it may have been wrongly designated as a Committee on Drug Deterioration, since very little information along this line is available, and your Committee has taken the position that a report of the actual conditions found in the drug markets is really what is desired.

The deterioration of crude drugs can easily be kept within reasonable limits, and as it is to the interest of the large vendors to protect such drugs against change, as far as possible, it is not likely that gross deteriorations will be met with to any appreciable extent. Worm-eaten and mouldy drugs, caused

to be so by reason of careless storage, are not likely to meet with ready sale.

A few drug preparations, however, are likely to undergo deterioration, such as spirit of nitrous ether, tincture of zinc, fluid extract of wild cherry bark, and galenical preparations of coca leaves; with the exception of the two latter such changes can be brought within control by proper measures, which as a rule are familiar to all pharmacists. The deterioration in fluid extract of wild cherry bark is practically beyond control, and as it is of a progressive nature and nothing is known at the present time to control this inherent tendency, both preparations have been eliminated from the Pharmacopoeia and pharmacists can hardly be held responsible for the quality of these preparations.

The following extract taken from a report recently made to the New York Pharmaceutical Association by Dr. H. H. Rusby, the Government drug expert of the port of New York, is inserted as indicative of the conditions surrounding importation of crude drugs during the past year.

"On account of the difficulty of securing drugs and chemicals from abroad, owing to war conditions, prices have advanced greatly, and in some instances have become almost prohibitive, and with such advance the tendency in many cases has been deterioration of crude drugs. In times of scarcity, lower grades of drugs are apt to be offered, both of the wild and cultivated varieties, and deliberate adulteration is naturally encouraged by high prices.

Due to the careful investigation of several inspectors at the ports of entry, practically all importations of sub-standard drugs are excluded, and while the official reports may show frequent attempt at introducing drugs of lower grade into this country, such drugs as a rule do not find their way into the open market. Purchasers, however, who under normal conditions would not consider anything but the best quality of drugs, are often compelled to accept lower grades in order to meet their demands.

"The conditions responsible for offer of such lower grade drugs are in the main the scarcity of men competent to gather and prepare wild drugs, or to cultivate properly others, and such work has fallen into the hands of less experienced and less conscientious persons. Eternal vigilance is therefore necessary at the various ports of entry and the chief drug centers, so as to reduce the introduction of inferior grades of drugs to a minimum. Inasmuch as the Federal and state laws permit the sale of sub-standard drugs and preparations of drugs, provided the actual quality of such drugs and preparations is stated on the container, it is but natural that with increased prices for the better quality, lower grades will be offered and taken."

Of all drugs examined spirit of nitrous ether has shown the greatest amount of deterioration, which must undoubtedly be described to the manner of preservation. Much work has been done during the past five or six years with the view of determining the best conditions under which spirit of nitrous ether can be kept satisfactorily, among which the investigations of Kebler, Palkin and Ewing, reported in January, 1916, is especially noteworthy. These analysts prepared two lots of spirit of nitrous ether in May, 1914, one lot with 95.5 per cent U. S. P. alcohol, and the other lot with U. S. P. absolute alcohol (about 99.5 per cent).

The lot made with official alcohol assayed 4.56 per cent of ethyl nitrite, while that made with absolute alcohol assayed 4.68 per cent immediately after their preparation. The two lots of spirit of nitrous ether were put up in bottles, some in large and some in small flint glass bottles, some in diffused light at temperatures varying from twenty to thirty-two degrees Centigrade, some in refrigerators, some with addition of potassium bicarbonate and some without.

All determinations of ethyl nitrite were made gasometrically as prescribed by the U. S. P. Examinations made at regular intervals show conclusively that all samples kept in refrigerators, whether in amber colored or in flint glass bottles, kept remarkably well, the greatest deterioration during the eighteen months being not above 0.6 per cent in a sample made with efficient alcohol and kept in a large flint glass bottle, while samples kept in small bottles showed scarcely any change, and in a few cases as little as 0.03 per cent.

The addition of potassium bicarbonate in spirit of nitrous ether appears also to add materially to its stability, even when the spirit is kept in diffused light at room temperature. One sample kept in small amber colored bottles showed a loss of only 0.36 per cent at the end of eighteen months.

In all cases the samples made with absolute alcohol kept very much better than those made with alcohol of 95.5 per cent of strength. One sample of this lot kept in small flint glass bottles exposed to diffused light lost but 0.48 per cent during the eighteen months of exposure.

It thus seems that it is possible to keep spirit of nitrous ether satisfactorily in small (2 oz. and 4 oz.) amber colored vials in a cool place, preferably in a refrigerator, and by not carrying an excessive stock of this preparation, pharmacists should be able to dispense at all times spirit of nitrous ether complying with the pharmacopoeial requirements.

The work of Bachman and Turner, reported to the Minnesota Pharmaceutical Association in February, 1916, also shows very interesting results, but no experiments were made with cold storage, the samples examined having been kept in small and large amber colored and flint glass bottles on the store shelf in diffused light during one year and tested at monthly intervals.

While the following tabulated report is far from complete and therefore rather unsatisfactory, it is the best compilation that could be made under existing circumstances, and your Committee desires to apologize for its deficient character.

While in the case of crude drugs it was possible to obtain specific information as to variation from definite standards, such was not the case with pharmaceutical preparations, which frequently were simply marked "Passed" and "Not passed." It must be assumed that under "Passed" are included all those preparations which either conform to the official standard or vary but very slightly from these, while in the case of those preparations marked "Not passed" the deviation from the official standard, either in deficiency or excess, was sufficient to cause the rejection of the sample. As the data regarding the strength of pharmaceutical preparations could not be made

complete, your Committee decided simply to include them all under the two headings above named.

In the forthcoming ninth revision of the U. S. Pharmacopoeia, which is to go into effect on September 1, 1916, more clearly defined assay methods for the examination of chemicals, crude drugs and their preparations will appear, as also tolerance limits for excess or deficiency of strength which it should not be difficult to meet. Respectfully submitted for the Committee.

Chairman Rose: Gentlemen, I need not say that the amount of work done by your committee is shown definitely by this paper. I had a little experience somewhat similar to Dr. Caspari's paper some years ago and I know the amount of analytical work and examinations that the gentlemen have gone through. This matter is for discussion by Dr. J. M. Francis of the Parke Davis Company.

REMARKS OF DR. J. M. FRANCIS, DETROIT.

Mr. Chairman and Gentlemen:

I will be perfectly frank with you and say that I am somewhat embarrassed. It is rather an embarrassing situation to attempt to discuss a paper of this kind before men who are tired and particularly before men who are hungry; so instead of taking an hour of your time, which I might very well do, and I think that in the course of that hour's time I could tell you some things you do not know, I will try and include what I have to say, at least the most important part of it, in the course of about ten minutes.

I might say that in discussing this matter I bring about twenty-five years of experience in the purchasing and the handling and the working up and the observation of crude drugs. During that time there have passed under my supervision a good many thousand tons of various kinds of drugs, so that we might very well devote a half hour to this matter of the discussion of the quality of crude drugs which has been touched upon by this committee.

However, the important assignment given to this committee, as I understand it, was not so much a question of discussing the quality of the crude drugs and perhaps pharmaceuticals generally throughout the country as the much more important question of deterioration of drugs and in a greater measure the deterioration of the substances ordinarily spoken of as medicine, that is to say, crude drugs and derivatives of crude drugs in the forms suitable to be dispensed by the druggists and prescribed by the doctor.

I want to say, furthermore, gentlemen, that in my opinion this matter of deterioration of drugs is about the biggest and the most important question that confronts all of those that are concerned with the manufacture of medicine and the giving of it. It is a matter of extreme importance to the manufacturer of pharmaceutical preparations, it is a matter of supreme importance to the druggist who manufactures on a small scale or whose mission in life it is to dispense pharmaceutical preparations. It is a matter of supreme importance to the doctor, because it has to do with the effects that are going to follow the administration of the medicines that he prescribes.

It is a matter of supreme importance to the patient who takes these medicines, because it has to do with the effects finally obtained when the medicine reaches its source of usefulness.

I take it as a matter of course that the Drug Commissioners of the United States, both national and state, consider that their mission in life is not one of punishment. Their supreme mission is not to seek out the malefactor and to punish him for his shortcomings, but pharmacy rather is to work in conjunction with all those concerned; to aid so far as possible in the dissemination of the necessary knowledge in the education of the retail pharmacists and finally working together to first accumulate and to then apply that knowledge that will insure the dispensing of drugs that are always first-class and wholly efficient.

If this is to be done it means the consumption not of days or of weeks or of a year of effort, but of a great many years of effort properly directed, unified and worked out in a systematic way, and it is going to call for the co-operation of every man and every firm and every force that is connected in any way with the purchase of drugs, their manufacture, their storage or their dispensing.

Take the case of a retail druggist: Assuming that I have a drug store on the corner and I carry in stock a fluid extract of belladonna or various things. It is my mission in life to supply good quality. As I understand it, it is not the desire of the Drug Commissioner to find a chance to come into my retail drug store and punish me because I have run contrary to some law or regulation enacted by the state or the United States.

It is his mission, however, to see that the doctor receives fluid extracts of full strength when he writes a prescription. It is his mission to see that I as a retail druggist am catering to the doctor and to the public in so far as knowledge and circumstances will permit and carry fluid extracts of full strength and as they should be.

But here comes the important question. Am I, as a retail druggist, to know that a fluid extract made on the first of January, 1916, is going to be 50 per cent active on the first of July, 1916, or on the first of January, 1917, or the first of January, 1918, and am I, as a retail druggist, supposed to know what the strength of ergot is going to be in a certain length of time, six months, twelve months, eighteen months or two years? Are you, gentlemen, as expert chemists for the Food and Drug Commissioners, going to have that information to give me as a retail druggist? Is there a Food Commissioner or a Drug Commissioner in the house today who would dare tell me that fluid extract of ergot would be 50 per cent in strength after it has been in storage for four months or twelve months or eighteen months? I want to say this is a practical case in point that has a bearing on this subject under discussion today.

The thing is not so much the morality of Francis, the retail druggist on the corner, as it is to have definite information bearing upon the fluid extract of ergot that will enable Francis the druggist to decide conscientiously whether to sell the stuff

after six months or twelve months or eighteen months, or should you, as Commissioners, have that information to pass on to the retail druggists, or should the manufacturer, on the other hand, who supplies that druggist; should he have the specific information? There is the crux of the whole thing, gentlemen, and it serves to illustrate what I have in mind today in making the statement in the beginning that the most important question concerning us all is just one of deterioration, or, to turn it around the other way, stability of pharmaceutical preparations.

Now when you go up against that question you can see how very complex it is, because the ordinary druggist in this latter of time, will carry anywhere from three thousand to eight thousand preparations upon his shelves; not three thousand or eight thousand entirely distinct things, but many of them are distinct as compared with another and many are combinations of one, two or three different ingredients, and what is true as regards the stability of a single one of these ingredients is not true of other circumstances or other combinations.

There is no such thing as stability in pharmaceutical preparations in the ordinary acceptance of the term, gentlemen. If you are keeping a hardware store and have jackknives and horseshoes to sell you know that they are perfectly stable so long as you keep them perfectly dry and so long as they are not oxidized through contact with moisture.

If you walk into a drug store and the druggist shows some carbonate of soda you should expect it to preserve its full therapeutic efficiency for a period of three or four or five or perhaps ten or twenty years, provided you keep it dry. Also calomel is quite stable. Under ordinary conditions it retains its full virtues for a period of perhaps three or four or five years; but combine your bicarbonate of soda and the calomel in the form of a compressed tablet and you have a delicate combination.

The same thing is true of acetanilid and practically all the alkalines. The same is true of the iron salts when made into elixirs, associated with sugar or various acids.

In other words, the information we have concerning a single substance may not be true when you associate that with any one, ten, twenty or thirty or a hundred other ingredients. So you see it is complex matter and there is an immense amount of information to be gained by all those concerned relative to the question of stability or deterioration.

Now then, if you will allow me to infringe upon your patience for a few minutes, let us glance at a few of the things that have to do with this matter of deterioration or stability.

First of all we find in most pharmaceutical preparations an inherent tendency to break down and form simpler bodies. The molecular structure of such substances is very complex, and there is this evident tendency to the formation of other bodies of simpler form and less complex constitution, and unfortunately it frequently happens that in course of this rearrangement original physiologic activity is lost and perhaps wholly new therapeutic activity is developed.

This tendency to disassociation on the part of complex substances is very well illustrated in the case of pepsin and of the various other therapeutic agents derived from the various animal glands or similar material obtained from the animal body. Regardless of the care exercised in preparing them for pharmaceutical use and of the precautions that may be taken in their preservation or storage, this inherent tendency to decomposition or resolution into simpler bodies will assert itself to a greater or lesser extent from the very beginning. This is paramount to saying that final decomposition and loss of therapeutic activity in such complex bodies is inevitable, and this is a truth which must be recognized both by the pharmacist and the physician.

The same thing holds true in a lesser measure in those preparations made from drugs containing glucosides, and in still lesser degree with some of those containing the alkaloidal bodies.

Aside from this tendency to spontaneous breakdown we have also to do with that large body of substances having digestive power, and which are generally denominated "enzymes." We know that they are present in various portions of the animal body, being resident in most instances in certain glands or other specific organs which have to do with their elaboration and secretion. They are also found generally distributed throughout the circulatory system of animals and while ever present they are also ever active.

Turning now to the vegetable kingdom from which so many of our therapeutic remedies are derived, it is a known fact that enzymes or digestive substances of one kind or another are abundantly present in the vegetable structure, particularly in the leaves and in the circulating sap. When this animal or vegetable matter is prepared in some way for therapeutic or medicinal use, it unfortunately happens that in a very large number of instances one or more of these enzymes are also included. They seem to show a tendency to operate on the desiccated or extracted material in storage on the shelves of the druggist or physician just as they did while originally present in the animal or vegetable tissues. In other words, here we have another series of natural agents tending toward the breakdown or decomposition of our medicinal remedies. Of 50 per cent within six months of the date of manufacture. Luckily this happens to be a fluid extract which can well be eliminated from medical practice. Fluid extract of aconite was not quite so unstable as that from coca leaves, so that physicians can prescribe fluid extract of aconite twelve months old and anticipate that the patient will obtain at least 80 per cent of normal therapeutic effect. Turning to the more important fluid extracts, such as those of belladonna leaves, belladonna root, ipecac, nuxvomica and opium, if they are properly protected from bright light and contact with air and the loss of alcohol, we would expect from them normal activity for a period of at least three years and perhaps in many cases five or six years.

Please do not misunderstand me. I do not mean to say that you can not frequently find a bottle of one of the more commonly used fluid extracts which shows manifest deterioration, and this will be especially true, if it happens to be a bottle which has been partially emptied through filling prescriptions from time to time or if it has been standing on the shelves for

a long time. In other words, such defense as might be offered as a result of this comprehensive test above mentioned is not intended to cover pharmaceutical stock which has been kept for an indefinite length of time and with total disregard as to proper conditions and as regards the peculiarities of the particular substance under consideration. What I do maintain is that where proper precautions have been exercised in the storage of fluid extracts, tinctures, and similar pharmaceuticals, they can, as a general rule, be relied upon to give the expected results when administered to the patient, but to this general rule there are some very puzzling exceptions which serve to demonstrate that our knowledge of the rate of deterioration and particularly of the agencies which produce deterioration are not sufficiently definite to permit of our laying down some hard and fast rule or time limitation. As a very good illustration, I have seen fluid extracts of ergot that showed only 50 per cent normal activity within six months after the date of manufacture. Why this rapid loss of potency I am unable to explain. I assume that it was due to the process of incipient decomposition which had begun in the crude drug and which for some unknown reason continued to operate in the fluid extract. On the other hand, I have tested fluid extract of ergot that had been manufactured and stored on the shelves of a retail pharmacy for five years, yet after the elapse of this long time it showed a full 100 per cent activity. This, of course, was a remarkable record for a fluid like ergot, which is certainly open to suspicion after the elapse of eighteen months from the date of manufacture. I have seen fluid extract of digitalis, which is usually regarded as somewhat unstable, that would test only 50 or 75 per cent after the elapse of eight months, and yet other samples of fluid extract of digitalis would register 100 per cent activity after the elapse of three years. I might cite scores of examples showing discordant results, but these citations will serve the purpose I have in mind.

What I am leading up to is an answer to the question which is so frequently asked by gentlemen who are not familiar with these facts and that is—"Why not put an expiration date on the label of every fluid extract and tincture?" At first glance this seems to be entirely proper and logical, particularly as it would absolve the retail pharmacist and the physician from all responsibility. To be perfectly frank with you gentlemen, this is a responsibility so great that no conscientious pharmaceutical manufacturer is willing to accept it. The one basic fact which must be recognized in discussing this important matter is that there is a great responsibility involved in the handling of pharmaceutical preparations, and a fair share of this responsibility must be assumed by all concerned, which means first of all the pharmaceutical manufacturer who is obligated to let nothing go out into the market under his label unless he is assured that it is of good quality, normal in every respect and above all things of standard activity. Second, the retail druggist who acts as purveyor to the physician must accept his responsibility in considering the peculiarities of his stock in trade, and he must take proper precautions in the matter of age, storage, etc., to insure in so far as possible that no medication is dispensed that does not approximate normal activity. Finally a physician can not logically evade his responsibility in this important matter, for he always has the privilege of inspecting druggist's stock and of making all reasonable inquiries as to its age, its condition and methods of storage.

If one were able to manufacture a fluid extract or tincture and then as the result of experience and absolute knowledge to say definitely that the product would cease to test less than 100 per cent of standard activity after an elapse of twelve months, it would be a very simple matter to place an expiration date on the label. I have said enough, however, to convince you that no such definite time limits have been worked out, and we have not at the present time any such comprehensive knowledge as would enable us to set definite time limits for any of these preparations, and the best that can be done in a practical way is to select those preparations that are known to be most prone to early decomposition and put on the labels of these the date of manufacture. Where this is done both the pharmacist and the doctor are placed on guard, and they can then exercise such precautions as seem to them desirable or necessary to prevent the dispensing of a product that has materially deteriorated. This is not a case of putting dollars above humanity, nor is it a case where the manufacturer ceases to accept manifest responsibility. If more than this were done in the present state of our knowledge, it would undoubtedly operate in such a way as to bring about great financial loss to all concerned and would arbitrarily result in the destruction of thousands and thousands of dollars worth of stock that might be entirely suitable for use. Luckily the doctor recognizes that medicine and particularly dosage is not an exact science and he realizes furthermore that the response of patients who are given a dose of a medication is seldom uniform, and, in fact, that the response of the same patient to a given dose is not the same from day to day or from week to week. As a result it is the universal practice to note the effects following the administration of any given dose of medication in the case of each particular patient and then to increase or decrease subsequent doses in accordance with the symptoms developed. This custom on the part of physicians in conjunction with co-operation between the physician and dispensing druggist will obviate most of the evils liable to arise from deterioration.

Another point which is sometimes a cause for misunderstanding and criticism of the manufacturing pharmacist is that of the so-called volatile tablet combinations. In other words, we sometimes see criticisms to the effect that the manufacturers court severe criticism because they manufacture tablets containing such volatile substance as carbolic acid, camphor and menthol; or that they put up in tablet or pill form pharmaceutical substances that are prone to deteriorate rapidly.

We maintain that the manufacturer does not deserve condemnation provided only that his goods are properly labeled. It is manifest to every sensible man connected with the profession of either pharmacy or medicine that if carbolic acid, or similar substances, are combined with milk sugar and then compressed into a tablet that the volatile substance will slowly but nevertheless continuously volatilize if these tablets are exposed to the air. Nevertheless, where they are properly protected by the use of a tightly stoppered bottle or other con-

tainer, the loss of volatile substance is sufficiently slow to enable their very general use and prescription by physicians provided only that some reasonable care is exercised in criticizing them from time to time.

The nose will usually tell a physician or pharmacist whether there has been a noticeable loss of medicinal ingredients in such cases or he may resort to taste or perhaps to some simple chemical test which will give him the necessary information. Again, it is reasonable to suppose that if the physician suspects there has been an appreciable loss of the volatile medication that this can be compensated by the administration of larger doses. After all, we fall back upon very practical evidence that such combinations in tablets or pill form have been and are now being very generally used with perfect satisfaction and success. If reasonable care is not exercised in insuring that the stock is not deteriorating, this can not reasonably be charged to the manufacture, nor to the principle involved. Physicians as a matter of convenience demand such combinations and their usage is based upon satisfactory practice, and surely we must admit that under these conditions the usual wholesale or sweeping condemnation is not logical. Taking another view of the matter, what better course can be adopted under the circumstances. As an example, apomorphine is a very commonly used and an exceedingly important medication, and yet it is a matter of universal knowledge that it is a very unstable compound which will inevitably undergo decomposition whether in the form of an ordinary powder or whether it is in the form of tablets. Because it does deteriorate, shall we discard it altogether? Certainly the physician would not consent to this, and as a result such tablets are manufactured and very widely distributed, but by common consent both the pharmacist and the physician are on guard and criticize the physical appearance of tablets of apomorphine, and in this way safeguard the interest of the patient.

You will find that most manufacturing pharmacists at the present time place a cautionary paragraph upon the labels of all such packages of pills and tablets, directing attention to the fact that they are prone to undergo decomposition or to suffer loss because of volatility.

Here again we have not the necessary knowledge to resort to absolute time limitations which can be printed on labels. Such a tablet may undergo rapid deterioration or suffer undue loss through volatility in one case and yet under certain other conditions of the storage or temperature, deterioration might be very much less rapid. One can not, therefore, say in any such a case that a bottle of these tablets should be rejected after the elapse of six months, nor on the other hand might it be safe to say that they should be dispensed with full confidence for a period of twelve or eighteen months.

Now, gentlemen, we might discuss this matter for a half hour longer and still not cover this wide and interesting field having to do with deterioration of pharmaceutical products. I have touched upon a few phases of this matter, and repeat as I have previously intimated, that it is not at all safe in inspecting a stock of pharmaceuticals or in attempting to lay down rules for the guidance of the manufacture and storage of pharmaceuticals, to be guided by abstract theory. In the present state of our knowledge the theory is very apt to be wholly erroneous, and the risk is too great in view of the very widespread injustice that is likely to follow official action covering the stock of the thousands of retail pharmacists of this country. Our attitude toward this matter is continually changing, and this is entirely proper because every year brings us new facts, and we are all aware that progress is being made in the manufacture, storage and dispensing of pharmaceutical preparations. There is no comparison between the fund of knowledge available to us today and that which guided our predecessors during the past generation. The one thing to be recognized is that we have merely begun the task of solving the many perplexities attendant upon the manufacture, storage and dispensing of medicines, and I will end my remarks as I began them by making a final plea for some systematic co-operative work on the part of this Association. This problem is not going to be solved by us and perhaps it may not be fully worked out by our children, nor our grandchildren, but the stupendousness of the task is no reason why we should not attack it in some logical way.

Chairman Rose: Gentlemen, it is needless to say that we appreciate the talk of Dr. Francis. I am glad to see that he, like others during the past few years, urges the co-operation of the State and National Food, Drug and Dairy Association in this important question. Among others that we have got to co-operate with are the pharmaceutical societies particularly, because with their work and the compilers of the Formula Board, of which Dr. Caspari is a member. I think we have good material. I do believe that this committee should be a more permanent body and not only a permanent but consist of men particularly trained along that line.

Dr. S. J. Crumbine: Mr. Chairman, may I ask a question? This is too important a matter to let it go even at the expense of time. I want to ask Dr. Francis a question which, it occurs to me, is entirely a practical question because of the great difficulties surrounding this matter. It seems to me it might be a temporary measure—not that the Food Commissioners have any authority or have any desire to do so, but it is in the hands of the manufacturers absolutely—and that is this: Can't the manufacturers arbitrarily, despite all else to the contrary, arbitrarily on the ground of this instability of certain preparations, put up certain of these unstable preparations in smaller bottles and absolutely refuse to sell any large sized bottles? Can't that be done or would the manufacturer be willing to take the bull by the horns to that extent?

Dr. J. M. Francis: I can answer the Commissioner by

saying that commercial conditions, and I use the word commercial because the almighty dollar lies behind medicines as it does behind everything else, commercial conditions in this country are improving as they become more altruistic. That is a surprising term to use, I suppose, isn't it Commissioner? Nevertheless it is a fact.

But we have not as yet reached the time, nor has the entire pharmaceutical manufacturing industry of the United States reached the point of taking that concerted action. It is being taken, however, by the pharmaceutical manufacturers to some extent today, because you will find that in many, many instances, the substances that are most likely to be decomposed are being put up in what we call original packages, one ounce bottles.

Let us, for example, take ergot: You will find that some of the pharmaceutical manufacturers are every day putting ergot in one ounce bottles and, moreover, that the same is saturated with carbonic gas. They will take and drive the air out of those bottles by driving the cork in flush, and then seal it and mail it to the retail trade and ask them to purchase this article in small original packages.

Next is the use of the four ounce bottle. We are making progress along those lines, but I want to tell you that it is very hard to introduce those small packages in competition with the large sized packages. It is a matter of trade conditions. If you were to attempt to put that thing in force the next week I would say it would almost mean a riot. It has got to go along gradually by education.

Chairman Rose: Gentlemen; the program for this afternoon will begin at two o'clock and we will not take up the program as it is printed, because some of the papers will have to be postponed on account of the lateness of the arrival of some of the gentlemen on the papers.

Chairman Rose: If there is no objection we will stand adjourned. (The convention adjourned to meet again Wednesday, August 9, 1916, at 2:00 p. m.)

SIXTH SESSION.

WEDNESDAY, AUGUST 9, 1916, 2:00 P. M.

President Barney: There are just a few things that I desire to take up in opening this meeting. One is that the Chair desires to offer an apology for whatever part he had in making the time of meeting ten o'clock. I think it was a mistake. We find that meeting at ten o'clock means about ten-thirty, and we have very little time in the forenoon. I would like to entertain a motion that we meet tomorrow morning at 9:30, if it is so desired by the convention to save a little time. Is that the desire of the convention or do you prefer to continue to meet at ten o'clock or get together at nine-thirty?

Mr. J. McCabe: For the purpose of getting a motion before the house I move that the Chair be authorized to call the meeting for nine-thirty in the morning.

President Barney: You have heard the motion. Is there a second to it?

Motion seconded.

President Barney: Are there any remarks to be made upon the question? If not, all in favor please say "Aye." Contrary "No." It is a vote.

President Barney: Now there is another matter that the Chair does not desire to decide arbitrarily, and that is as to just what time we will close. A great many people have come to me and said that if we hold an evening session we can get through, that is, if we hold an evening session tonight we can easily get through tomorrow some time about five or six o'clock and get away tomorrow night. I have no desire to make any decision on that and I would like to have that discussed by the convention.

Dr. S. J. Crumbine: Mr. Chairman, I move that we hold a night session tonight beginning at eight o'clock with a view of terminating the session tomorrow evening.

Mr. John McCabe: I second the motion.

President Barney: You have heard the motion and the second. Is there anything to be said upon the question? If not, all those in favor will please say "Aye." Contrary "No." The motion is carried and we will try and close tomorrow evening.

We have with us for the first thing on the program this afternoon a report of the Committee on the Assembling of Literature on Devitalized Foods in Their Relation to Nutritional Disorders, Dr. S. J. Crumbine, Chairman, Secretary State Board of Health, Kansas. We will now hear from Dr. Crumbine.

Dr. S. J. Crumbine: Mr. President, and Members of the

Association, I was asked to be Chairman of this Committee for Assembling of Literature on Devitalized Foods in the Relation to Nutritional Disorders, and I came to the conclusion, and I have since been very thankful that those conclusions were made, in fact, I rather congratulated myself after hearing the splendid, masterful address this morning. The first conclusion was that the mere assembling of the literature in the shape of a bibliography on this subject would carry very little information with it itself, and would probably be uninteresting, and a second conclusion was that what this convention wanted to hear was not a bibliography on devitalized foods in their relation to nutritional disorders, but men who knew something about the subject by reason of research and investigation.

With that thought I asked the Executive Committee to extend an invitation to Prof. McCollum and Prof. Voegtlin with a view of hearing these men who have devoted so much time to this tremendously important subject, and I am sure you all agree with me already without having heard the other address that the Executive Committee made a very wise choice in the conclusion.

The first thing I concluded was that I would really confine myself to the subject in hand, namely, the assembling of a bibliography on this subject, which is appended to the few words I expect to say, which are largely repetitions of what I said last year at Berkeley, and I have contented myself with simply doing that. I do trust, however, that the Commissioners may use this bibliography in reading during the coming year, now that your interest has been excited by hearing that splendid address this morning in looking up this important question.

REPORT OF COMMITTEE TO ASSEMBLE CURRENT LITERATURE ON SUBJECT OF NUTRITIONAL DISORDERS, THE RESULT OF SO-CALLED DEVITALIZED FOODS.

BY DR. S. J. CRUMBINE, KANSAS.

At the annual meeting of the Association in Berkeley, Cal., last year your chairman made use, in part, of the following language in his presidential address:

"An equally if not more important question must soon engage the attention of producers, manufacturers and food control officials. It has been definitely determined that most food products contain certain accessory substances which have recently been shown are essential for the growth, development and well-being of the organism. When these substances are destroyed in the preparation of the food, the body suffers and sooner or later becomes subject to various diseases. Just what these substances are and the role they play in metabolism has been and is now the subject of much discussion and painstaking investigation."

"We are just beginning to understand how it is possible that in the midst of plenty, people may be actually starving—starving in the sense that normal metabolism is interfered with, producing disease which ultimately proves fatal."

"It, therefore, appears that we as food officials must sooner or later be interested in, take due cognizance of, and encourage the production and manufacture of foods by such means and processes as may preserve their vital life-giving principles."

"It may be a long way in the future when food officials may legally assume such control, and yet it is the speaker's belief that no more vital necessity confronts the food-consuming world than a careful investigation and research into these more recent questions which, from our present knowledge, seem to be absolutely vital to the proper nourishment of the race."

The President further recommended a committee to assemble the current literature on the subject of nutritional disorders, and the attached bibliography, together with the addresses which follow, are to be considered a part of the committee's report.

An investigation of the current literature on this subject is calculated to impress one with the notion that the necessity for painstaking investigation into the question of the relation that certain accessory substances contained in many or most raw foods, should have the most careful study and investigation, and that the equally important question of the preservation of such accessory or vital substances in the preparation of foods should have a likewise careful and long-continued investigation. And finally, that physiologists and clinicians should be encouraged to work out the problems of nutrition, particularly those related to the so-called deficiency diseases at the earliest possible moment, that the information may be available to the manufacturers of food products, food officials and the public in general. Your chairman cannot rid himself of the belief that sooner or later food officials must take official recognition of the relation this great question bears to food control.

Your chairman felt that the Association would be glad to have before it certain definite information from those who are competent to speak from personal experience in research and investigation rather than the mere assemblage of the literature or bibliography on this subject. It is our good fortune, therefore, to have an opportunity of hearing from some of the foremost authorities in this country, who will follow with addresses which we trust will serve to awaken a greater interest in this all important problem.

The Association is particularly fortunate in having Professor Voegtlin and Professor McCollum to address the convention at this time.

President Barney: You will notice that there was no

provision for discussion on this matter, but I am sure that the paper we had this morning, coupled with the remarks of Dr. Crumbine, will bring out considerable discussion of the subject.

Dr. S. J. Crumbine: We had better have it after the next paper.

President Barney: Is Dr. Voegtlin here? Does any one know whether he is in the city or not? I made some inquiries before about dinner time and I did not find any one who knew whether he was here or not.

Dr. S. J. Crumbine: Mr. President, I had assurance from the Surgeon-General that he would be here. He was regularly detailed, that was necessary for this purpose, and I have not heard of any change in detail.

President Barney: What would you suggest, Dr. Crumbine, now that he is not here, waiting until after his paper before we discuss yours?

Dr. S. J. Crumbine: It is immaterial. I think there is perhaps no discussion on my paper. I am sure Prof. McCollum would be glad to answer any question or discuss his address.

President Barney: Is Prof. McCollum here?

Prof. E. V. McCollum: Here.

President Barney: Now, are there any further questions that any of the Commissioners or others would like to ask Prof. McCollum, or would any one care to discuss his paper further?

Dr. S. J. Crumbine: Mr. Chairman, I would like to ask Prof. McCollum a question. In Prof. McCollum's address this morning no mention was made of the point I brought out in my address last year, namely, the destruction of these unknown substances through the federation of foods. I would like to ask the professor if any research work has been done by him on that line?

Prof. E. V. McCollum: Gentlemen, the situation seems to be that there has been no experiment made so far as I am aware, to determine the stability of the unknown dietary factor, the dietary factor A, the one, you recall, which is supplied by butterfat and certain other foods in chemical reaction other than that found in fresh butter, namely, a neutral reaction.

Now, in specially prepared pure butterfat you can heat that to the temperature of boiling water or slightly higher and you can pass live steam through it for a couple of hours and that butterfat, after being so heated, will still induce growth, when added to diets suitably made up apparently just as well as the diet without the heating.

On the other hand, the substance which I termed B, the substance which is frequently spoken of as a vitamin and the one which will cure a pigeon of polyneuritis. It is remarkable to see the experiments with the pigeon that has been fed on polished rice for anywhere from fifteen days to thirty-five days. They do not all come down the same time, but a pigeon will lose weight pretty rapidly along some time between fifteen and eighteen and thirty-five days. When you come to look at them some day you will find that they turn their beaks around and look back over their backs and after watching them another while you will probably find they retract their heads just as far back as they can draw them.

Watch them a little bit later and they are in a state where they wobble as they walk. Their footing is uncertain, they hold their wings right out to balance themselves for a leg.

If you discover a bird in that condition start to flutter and flop and when he stops he usually lands on his back with his head drawn back as far as he can and his tail up over his back so far as he can pull it and he is in a state of rigor; you turn him back on his feet and he starts to flop again and he will stand, but if you let him alone the chances are he will be dead in six hours. If you can give him a hypodermic injection of something that contains three or four milligrams, a thousandth of a gram of this active principle which I termed B and which is variously called a substance of vitamin, and go away and leave him on his back and come back in three hours, you will find him sitting like a normal pigeon. You walk up to him and put your hand on him and he will fly away.

Now that is the state of affairs you see in the polyneuritic patient. An extract which will induce a cure will stand a considerable amount of heating if you heat it in an acid solution. That has been done by students of medicine for the last seven or eight years and Funk and Rijkman and Williams and others in the Philippines. You can heat that extract in an acid solution, heat it vigorously and boil it for some hours. It may take a little bigger dose to do the work, but still a small dose will put the pigeon back on its feet. The solution in which the acid contained is neutral and you heat it and the destruction is much more rapid than it is in an acid solution. If you have a solution alkaline the destruction is very rapid.

You can make a solution that when you inject a little of it into a pigeon you will cure him just as I have outlined. You leave that alkaline at ordinary temperature, sub-normal, perhaps, over night, and you neutralize that and inject it into the bird and he does not get up. It depends upon the reaction. That is more or less an important factor regarding the destruction of the thing by a process of cooking.

A vegetable which happens to have such a balance between the acids and bases in the inorganic contents of that food acids, such a balance that will make an alkaline solution will give one result, when cooked between acid solution, you get another result. If it happens to be a thing like fruit, that is, inorganic action, you have considerable more stability of that thing.

You can't answer for all substances in one breath, it is a question of the chemical character of the substance contained.

I may add this point: After having described the behavior of a pigeon I may say that you give a rat a diet which is lack-

ing in this particular factor B, and he grows more and more emaciated as time goes on and finally becomes so feeble he can't get up and paralysis catches him, if he lives long enough to become paralyzed, as they do not always do.

Paralysis affects the hind legs and he may drag himself around for a few hours and die. A hypodermic of the proper stuff will just put him on his feet and you do not have to do anything more to him for perhaps two weeks. But give him a liberal dose of it and he will go back into that state, and then you will have to give him more.

It is of considerable interest perhaps to also describe what happens to a grown individual when you put him on a diet that is free of this substance which is carried by butterfat and alfalfa and certain animal fats, what happens on a diet that is free from that. You do not see the same thing in your animal as time goes on that you see when the diet contains the factor A but does not contain the factor B. You let the rat go without the principle supplied by butterfat dietary principle A, and after a while the first thing you notice the eyelids get swollen more or less from a discharge from his eyes and become more and more inflamed, more and more swollen up as a rule and practically always the ear becomes broken out with some sort of fistula and the ears look miserably. Some growth will come on the nose like scabs, which may grow up in the shape of a horn on the nose. They will die or will go blind and will go from bad to worse and will grow more and more emaciated and their eyes become swollen so that they can't open them at all and their ears are more like fungus growth than they are normal ears.

Without making any change in the diet other than injection of five-tenths per cent butterfat, in three weeks you will have a perfectly normal growth.

President Barney: Are there any other questions?

Dr. W. D. Bigelow: Mr. President, I would be very much interested in knowing if Prof. McCollum has any information about the acidity required to protect this organism. For instance, fruit will run mostly from two-tenths of a per cent up to a per cent and a half of acid, whereas our ordinary vegetables will be nearer one-tenth of a per cent.

Such vegetable as peas and corn and string beans are probably not far from a tenth of a per cent acid, as measured by titration with citric acid and phenol phthalein as an indicator, probably some of them as low as five one-hundredths per cent. I wonder if the behavior in the presence of such weak acids which is usually citric acid, can be measured or studied?

Prof. E. V. McCollum: The situation appears to be about this way: There are numerous instances in organic chemistry of compounds of a basic character such as those that have a free base that are relatively unstable in the form of the salts, but in the form of their salts with acids they are relatively stable.

The experimental evidence all seems to point, all seems to support the idea that what we have active here as when you have a sufficient amount of an acid—there are different acids that have not yet been investigated. As a rule I think all sulphuric nitrochloric acids have been applied. But it appears that if you have a sufficient amount of acid to convert the physiological active substances into a salt then you have the protective action.

Now, as to the particular efficiency of different organic acids I have no information at all.

Mr. Jay D. Miller: Mr. Chairman, I would like to ask Prof. McCollum whether in this feeding of rats he has experimented at all with Limburger cheese?

Prof. E. V. McCollum: No. The idea has prevailed throughout this work that we should proceed from the simple to the complex, and Limburger cheese being a thing of considerable complexity, we have not yet got to that degree of complexity. That will appear among the later ones that will receive attention. I may say in further enlightenment on this point that whenever you are dealing with an experimental article, as this is the bottom of a lower value of a tremendous amount of experimental effort, whenever you proceed to work with a diet with more than one factor operating, which you do not understand, you are not doing anything but wasting your own time and whatever time and money is being invested.

That is at the bottom of our present limited state of knowledge regarding nutrition. The idea is that nobody could see for a long, long time beyond the point that was visible to make combinations of food and feed them and see whether you get good results or poor results. The animal has been retained for a long time, more or less due to human efficient methods.

Those diets are all composed of naturally occurring mixtures and those mixtures are entirely too complex to interpret the cause of failure. What we have, therefore, is a mass of experimental data furnished us by animal husbandrymen. I refer to that principally because animal experiments are really the only ones that will receive any sort of control. The experiments with human beings have been, as a rule, of a character that gave us very little light on the

subject. Animal experiments have contributed a mass of information about what results are gotten with this and that combination of foodstuff.

If we could in any way look back of the written word and see how many of those experiments were actually controlled and actually represented performances of the animals on diets there outlined, that would be of some value to us.

Having had considerable experience in watching the animal husbandrymen experiment, I do not take their word for anything, more because they do not do what they say they do in more than one or two per cent of the instances that we might read about. They have not been adequately controlled. The one salient point, however, is this: What you get by that type of experimenting is that this combination of foods gives pretty good results and that this combination don't give you any results. Don't use that, they do not help to solve the problem which is really the greater problem involved in nutrition, namely, just wherein lie the weaknesses of this or that or the other combination of food and what should we do to make use of available food which does not give us as good results at the present time as we should have.

What we need and what I said this morning we need is accurate and definite, specific and complete data regarding the dietary properties of the different natural foodstuffs and how they are put together.

Mr. H. L. Harris: It has been demonstrated that by the addition of bicarbonate of soda to food and vegetables it destroys some of these valuable substances referred to as A and B. I would like to ask the professor if the addition of chloride of sodium would not give the same results by adding it to the combination and cooking it?

Prof. E. V. McCollum: Did I understand you to say chloride of sodium?

Mr. H. L. Harris: Yes.

Prof. E. V. McCollum: Chloride of sodium is a perfectly neutral salt so far as I know and has no set influence. Perhaps, however, I ought to read between the lines there and make a little further comment upon the matter which has not been mentioned.

There are plenty of things, for example, like legumes of beans and peas—this information is really not asked for, but if you are interested in hearing about this I will go on with that. Take such things as the bean, for example. Dr. Street of Connecticut has examined some of the carbohydrates of the soy bean very carefully. It practically contains no starch. There is but very little of any class of sugar which is utilizable by an animal. There is a considerable amount of the complex carbohydrate known as cellulose, semicellulose things which the highly organized animal has no provision in the digestive tract for converting into utilizable food.

Cellulose, if converted into glucose, becomes food, but cellulose for a man or a pig or a rat is not a food. You take such things as legumes, beans, for example. They have a lot of carbohydrates in there and also have a pot of protein. But if the particles of protein in the bean are wrapped up in Nature's own package, surrounded by an insoluble and indigestible carbohydrate envelope, it does not do your animal very much good to eat that kind of protein.

This, then, is what I want to say to you: There may be circumstances when, in order to make available the protein of a particular food, I mention beans as an example, your animal may actually come out ahead if you go ahead and so cook the legume bean as to destroy the two unidentified factors in that and make available your protein, then make such combinations of the bean and the other things that supply them with it.

Diet is a complex thing. If we are going to make use of the various foodstuffs we must focus our eyes on one of these factors and forget about the other. That is the great tendency and I would add at this point that I don't want to come here and give you any destructive propaganda against foods that are deficient in these two unidentified factors. Inexpensive as they are you can't get along without them and we should see that our diet contains proper amounts of them and we should see to it that the diet of our growing animals contain them. We should also be perfectly frank to admit that in modern industry there are various by-products—I do not know, I would not want to say whether it is a necessary thing to produce cornmeal or certain by-products of the starch industry.

We might get rid of all those and do without them, but I want to say that we have as a result of modern industry developed this by-product which did not have those two unidentified things in them and we make a fundamental mistake when we lose sight of other factors, when we lose sight of

certain economic angles in the things and condemn those things unqualifiedly as foods.

That is not the way to look at it. Diet is a complex thing. If we see to it that we have suitable combinations of foodstuffs and that all factors that are essential are present in the diet, then we can make use of these things which are frequently spoken of as devitalized foods and which give us the nightmare. Those things are excellent foodstuffs so long as you consider them strictly from the standpoint of their carbohydrate values, their values as proteins, their values for the contents of inorganic elements in them. They are up to that point excellent foods if combined with such things as supply their deficiency and make good their deficiency they are perfectly safe.

We have no reason to make any sweeping dietary reforms and put out of practice the use of all the products that are really worth doing this with. That is a question that I do not care to discuss. Those things have their place provided they are essential products of legitimate industry.

Dr. George Lloyd: Mr. Chairman, I would like to refer back to Mr. Miller's question in the matter of feed and put the question in a different form. It is possible the professor may be able to answer the question. You take fresh milk and precipitate the casein by the use of rennet as is done in the production of ordinary cheese, Wisconsin cheese, for instance, and the butter-fat is enclosed by the casein and carried down with it. I would like to know if the professor has done any work to show whether the butter-fat, either extracted from the cheese or existing in the cheese, whether it still carries the unknown A principle in full vitality.

Prof. E. V. McCollum: From personal experiment I am unable to give you any reply to that. Perhaps I could make no further reply, but in order to be perfectly fair with you I will call attention to some experiments which Dr. Minor reported at the meeting of the Biological Chemists in Boston last winter in which he made the statement that a sample of what he termed butter oil, that is, the more liquid portion of butter after standing around in the laboratory for a year, I think, about a year, no longer, was as active as it was in the beginning.

There, again, however, I would avoid giving you a wrong impression because not infrequently it would happen among organic compounds, a thing exposed to the light of the laboratory for a year would have suffered considerable deterioration, whereas the same thing kept in a dark storeroom and protected from the light would be perfectly active; cheese would be preserved under conditions which would certainly obviate deterioration of this type. I would predict it would take very much cheese added to a diet otherwise of purified foodstuffs to induce growth, but I do not know anything about it.

President Barney: This is a very important matter, but as you all know we wanted to speed up a bit and to close tomorrow night and on that account we will have to take up Dr. Taylor's demonstration showing a sterilizer that he has here. He is the Market Milk Specialist of the Department of Agriculture and he wishes to demonstrate a sterilizer here that I am sure you will all be interested in. He is not scheduled to appear before us, according to the program, until tomorrow, but he is obliged to leave tonight and we made a change to accommodate Dr. Taylor. This will be of very short duration and I will ask you all to stay and then we will have Dr. Helme's paper.

(Dr. Taylor here gave a very interesting demonstration and his paper follows):

DEMONSTRATION OF STERILIZER FOR FARM UTENSILS.

By DR. GEORGE B. TAYLOR.

Market Milk Specialist, Dairy Division, Department of Agriculture, Washington, D. C.

Mr. President and Gentlemen:

An ideal milk is one which is so produced, handled and delivered that it cannot be the cause of any disease; a milk so produced, handled and delivered that it is free from foreign material, is low in bacteria and has a good flavor. A milk of this character is both safe and clean.

While safe milk is of primary importance, it is to a certain extent foreign from the subject of this paper. For the production of clean milk, milk with low bacteria count and good flavor, several factors enter in. The two factors of pre-eminent importance are:

1. The sterilization of utensils.

2. The cooling of the milk and holding it below 50° F.

To keep down the initial bacterial contamination on the farm sterile utensils are necessary. In order to insure low counts milk on delivery, cold is necessary. The subject assigned relates only to the first of these essentials—the sterilization of

utensils. The other important factor will not be considered in this paper.

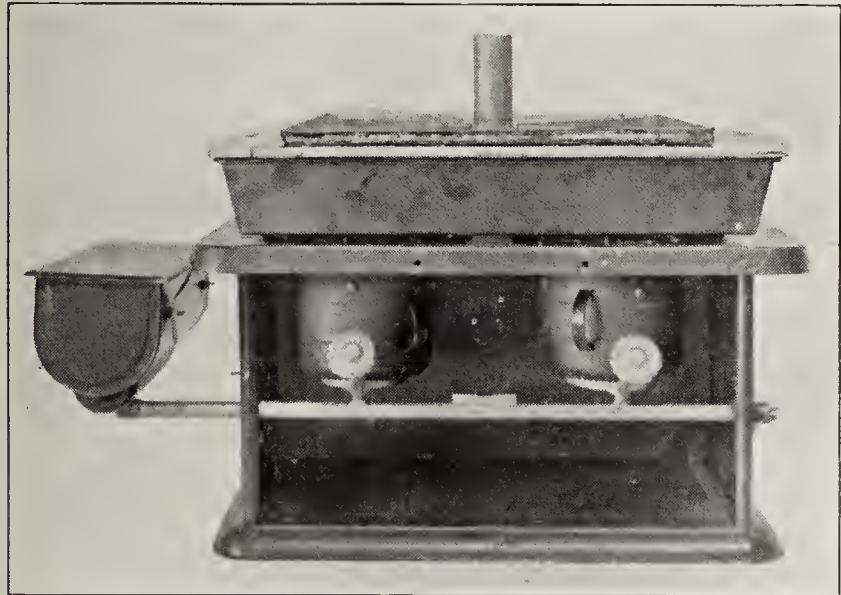
In this connection the utensils and conditions as found on the average farm delivering milk or cream to the receiving station or shipping direct to the city will be considered. The utensils of most importance found here are the milk pail, the separator and the milk can. The farmer himself or some member of his family is responsible for the cleanliness of the pail and the separator parts. He may be held responsible for the cleanliness of his shipping can; he should not be.

Of the three utensils the pail as a rule receives the most thorough cleaning. It is light, easy to handle, and any part of the interior can be reached; after washing it is dried in such a way that corrosion is slow. The process of cleaning the pail consists of rinsing with cold water, washing with so-called hot water and soap or powder and rinsing with hot water. This process should cease here but as a rule it does not. It is the invariable custom to wipe the pail dry with a cloth more or less unclean, thus recontaminating the utensil.

The separator receives less attention than the pail. Though used usually twice a day, it receives a fair cleaning only once a day. After separating the evening milking the only cleaning considered necessary is to run cold water through. A view of the separator bowl twelve hours after this kind of washing should convert the most skeptical as to the value of better cleaning.

The shipping can receives even less consideration than the other two. When the average receiving station and the average city milk plant are not equipped for cleaning cans, how can we expect the farmer to be able to do this? Recent information furnished by the Dairy Division shows that the city dealer handles this problem in seven different ways (Milk Plant Letter No. 28):

1. Returning the cans unwashed.
2. Rinsing with water (either hot or cold).
3. Rinsing out by means of hose with either hot or cold water.
4. Rinsing out with hose and then steaming with live steam.
5. Washing the cans out by means of washing powder and hot water and a hand brush, then rinsing.



Sterilizer in Position on Oil Stove to Sterilize Cans and Pails.

6. Same as 5 with an additional rinsing with boiling water or steaming.
7. Cleansing by means of machines of various kinds.

At least five methods of the seven given above are unsatisfactory. It is peculiar that the average milk plant has facilities for washing and sterilizing the bottles, but very few have special outfits for even washing the cans.

Practically all the bacteria which are taken out of milk utensils by washing are removed by physical manipulation. Very few persons in washing utensils can keep their hands in water above 120 degrees Fah. It is probable that most of the so-called hot water used for cleansing will not reach this temperature. It is also true that very few bacteria are killed at a temperature of 120 degrees Fah. Rinsing with water at the temperature of boiling water is a rarity.

Lack of proper cleaning for milk utensils will leave in those vessels a greater or less amount of organic matter which undergoes bacterial decomposition, leaving a peculiar, musty, more often foul odor, and increasing the number of bacteria in the utensils. This odor will be added to the milk put into the vessels, and the initial bacterial count of the milk will be increased.

You are all familiar with the disagreeable odor of milk utensils supposed to be clean. I shall not dwell upon that but wish to give you a few figures relative to the bacterial content of supposedly clean utensils.

Milk pails washed with cold and hot water and washing powder were rinsed with hot water and set aside for ten hours, that is, until the next milking period. One rinsing with sterile water removed from each of these pails an average of 5,240,000 bacteria. Considering those to be ten-quart pails there would be added to the milk put into these pails 550 bacteria per cubic centimeter or more if the pail were not filled with milk.

If improper washing leaves this contamination in pails, let us consider the condition of the average can: large, heavy, unwieldy, with dented, rusty surface. Milk cans, five and ten gallons, washed with brush and hot water and rinsed, were treated with 400 cubic centimeters of sterile water, within one hour after washing. This one rinsing removed on an average 4,600,000 bacteria. Cans washed in the same way were allowed to stand ten hours before being rinsed with sterile water. This rinsing removed on an average 1,400,000,000 bacteria from the can.

One rinsing with sterile water removed from cans 24 hours after washing an average of 2,680,000,000 bacteria, an increase 600 times greater than in the can freshly washed. While these numbers are exceedingly large it has been shown that this treatment does not remove fifty per cent of the bacteria in the can.

Four consecutive rinsings of a washed can with sterile water gave the following results:

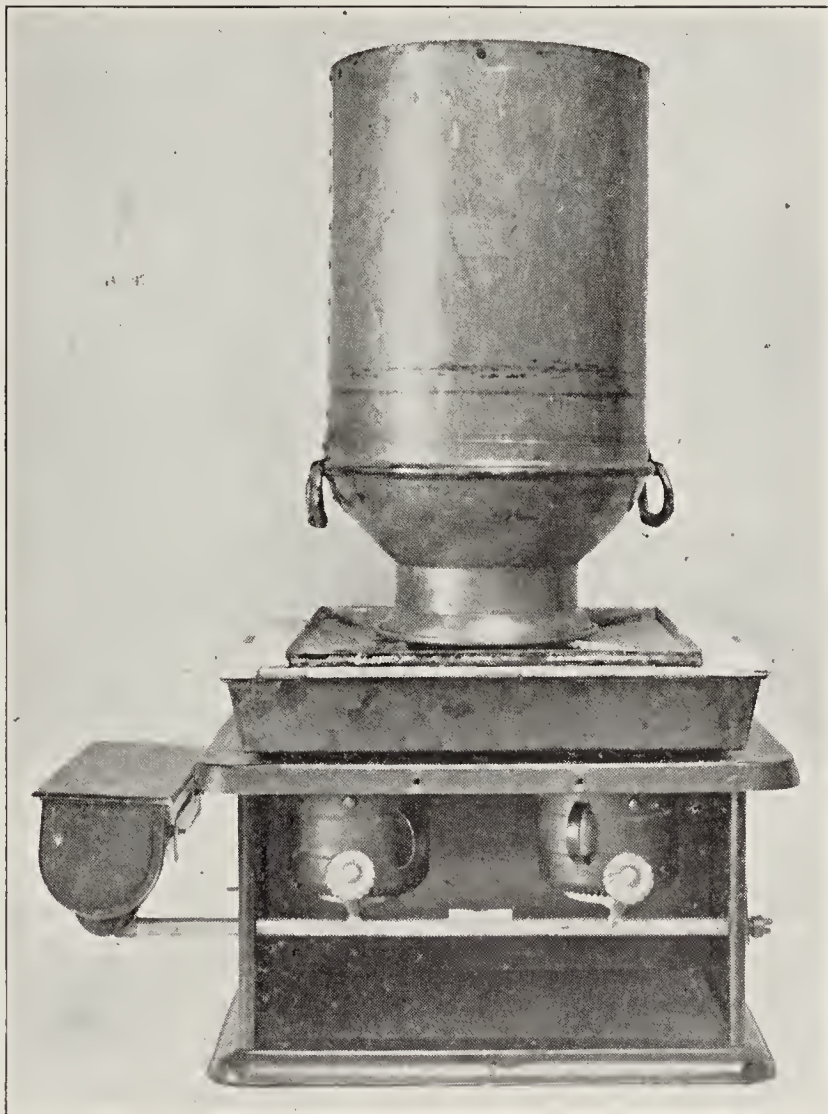
- First rinsing, 624,000,000.
- Second rinsing, 316,000,000.
- Third rinsing, 109,000,000.
- Fourth rinsing, 72,000,000.
- Total bacteria removed, 1,121,000,000.

From one washed can three rinsings with sterile water removed 8,887,000,000 bacteria.

If the milk put into these cans took up all the bacteria in the can, there would be added for instance to a ten-gallon can full of milk from 100 bacteria to 235,000 bacteria per cubic centimeter, depending upon the condition of the can and length of time after being washed.

These two factors, odor and bacteria, as found in the average washed milk utensils, indicate that washing alone does not render a vessel in fit condition to receive a pure, high-grade food product. To milk cans washed as above stated there was added live steam not under pressure for periods from five to ten minutes.

Eighteen cans washed and steamed and allowed to stand with covers on for 24 hours were rinsed with four hundred cubic centimeters of sterile water. One rinsing removed on an aver-



Can in Position for Sterilization.

age 4,000 bacteria per can. Five dilutions out of eighteen showed no growth of nutrient agar. Seven plates showed only one to three colonies. Of the number of bacteria surviving, practically all were classed as resistant spore forms. Four thousand bacteria in a ten-gallon can would mean one bacterium to ten cubic centimeters of milk—a negligible quantity.

Although the importance of sterilization by steam has long been known, its practical application along simple dairy lines has been neglected. Boilers and pressure sterilizers are too high in cost for the small dairy. Consequently, sterilization of utensils by steam could be expected only from our largest and finest dairies. The milk supply of the country is largely furnished by the small dairy farms.

There remained, therefore, the necessity of devising some apparatus which would be efficient and yet could be built so cheaply that it could be used on the small dairy farm. Farmers' Bulletin 748, entitled "A Simple Steam Sterilizer for Farm Dairy Utensils," now being issued, describes an apparatus which is believed will furnish to the small farm dairy the means of sterilizing milk utensils.

This apparatus consists of a two-burner wickless kerosene stove, a steamer and a galvanized iron box. Any other form of heater which will supply a good volume of steam at a temperature above 205 degrees Fah. may be used. The steamer consists of a common baking pan of standard size, fourteen by twenty inches by three inches deep. Fitted on this steamer is an insulated cover with a spout running from the center one and one-half inches in diameter and four and one-half inches

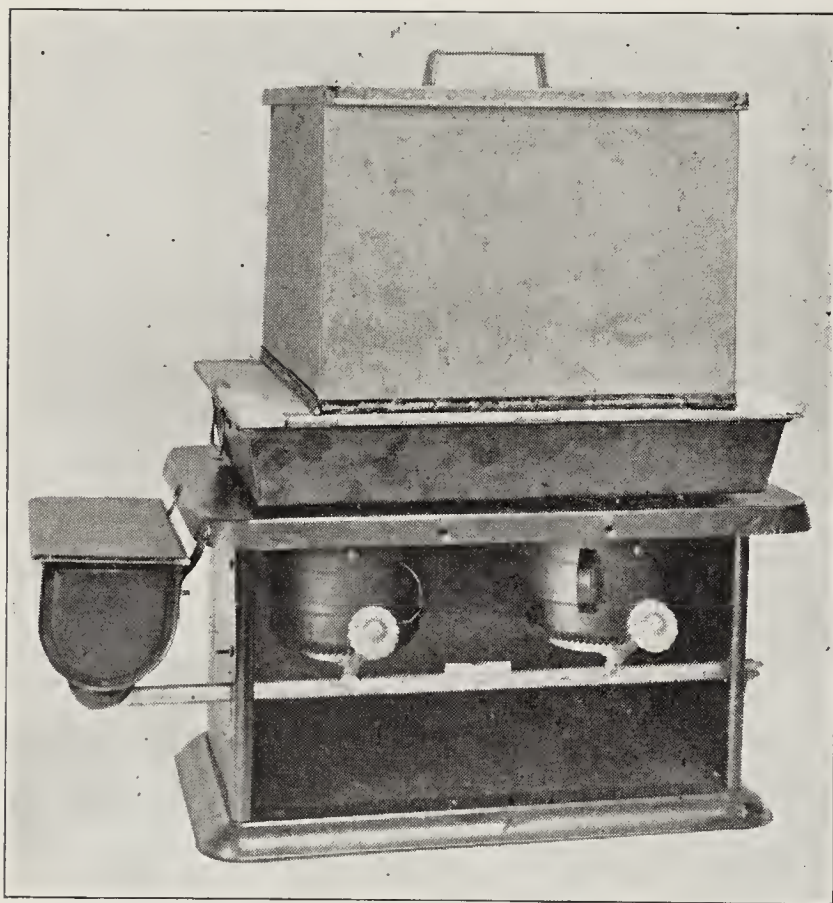
high. In the sterilization of cans or pails they are simply inserted over the steam spout as soon as the issuing steam registers above 205 degrees Fah., and left for five minutes. This apparatus will sterilize cans and pails in five minutes and leave them dry within a very short time after they are removed from the steam. A special box arrangement put over the steam spout sterilizes can covers, strainers and separator parts.

As to the time of operation, with one inch of water in the pan, with two kerosene burners, steam above 205 degrees Fah. will issue from the spout in twelve minutes. Two cans, two pails, separator parts, can covers and strainer cloth can be sterilized in a little more than thirty minutes, making the total heating time forty-two minutes. The operator simply notes the time at which the thermometer reaches 205 degrees Fah. and puts on and takes off the utensils, leaving each set for five minutes.

As to the cost of apparatus and operation, the apparatus, exclusive of the heater, can be bought or made locally at a cost of not more than four dollars. The kerosene heater should not cost more than this sum. Kerosene at ten cents a gallon to heat the water for the sterilization of the above-named list of apparatus costs about nine-tenths of a cent.

As to efficiency, cans as ordinarily washed and containing from 500,000 to many million bacteria showed on being steamed on this sterilizer a count from nothing to 24,000 bacteria per ten-gallon can, the average being 7,000 bacteria per can. The forms of bacteria left in the can were all spore forming. All cans dried completely in from one to five minutes after taking from the steam jet and setting bottom side down.

No other form of sterilization, except intermittent steaming or steam under pressure, is any more efficient and no other



Box in Position for Sterilizing Can Covers and Strainer Cloth.

form of steam sterilization as now used will leave a can dry and clean smelling after twenty-four hours.

As to the difference between milk in sterile and unsterile utensils, ten gallons of fresh, low-count milk were divided into two parts. Five gallons were run through an unsterile separator into a washed but unsterile can. Five gallons were run through a separator into a can both having been sterilized by means of the farm sterilizer. Both samples of milk were held at sixty degrees Fah.

The following table shows the results:

Separator and can washed, **not** sterilized. Fresh milk passed through separator into can. Separator and can washed and sterilized. Fresh milk passed through separator into can.

Time Hours	Bacteria per c.c.	Flavor Score.	Acidity as Lactic Acid gms. per 100 c.c.	Bacteria per c.c.	Flavor Score.	Acidity as Lactic Acid gms. per 100 c.c.
1	1,880,000	16	0.196	24,000	22	0.194
6	.....	..	0.198	.....	..	0.192
24	320,000,000	10	0.334	1,500,000	21	0.185
30	1,580,000,000	0	0.529	10,500,000	19	0.203
48	Spoiled and Putrid.			.....	..	0.247

Temperature of Milk, 60° F.

In order to ascertain the value of this sterilizer under actual farm conditions a week's work was done on a dairy farm forty miles from a large city. The morning milk from this dairy was delivered to a receiving station thirty minutes after milking. The receiving station cooled the milk and shipped it to the city, the age of the milk at time of delivery being three and one-half hours.

The dairy was bad, scoring below forty-five, the equipment being poor and the methods actually filthy. The sterilizer was taken to the farm and the pails and strainer cloths and one of the two shipping cans sterilized. No attempt was made to change the methods of milking or handling the milk. The average results for the morning milk are shown below:

Morning Milk—Average of five days:

1. Fresh at farm, temperature 95 degrees Fah. Samples taken just after mixing and placing into one sterile and one unsterile can.

Milk in sterile can, 191,000 bacteria per cc.

Unsterile can, 206,000.

2. At farm after cooling to 54 degrees Fah. during a period of 50 minutes.

Milk in sterile can, 310,000.

Unsterile can, 817,000.

3. At receiving station, eighty minutes after milking, average temperature 58 degrees Fah.

Milk in sterile can, 701,000.

Milk in unsterile can, 1,930,000.

4. At city railroad station, three and one-half hours after milking, average temperature 64° F.

Sterile Can.

701,000

Unsterile Can.

2,262,000

Preliminary results show that this dairy before the use of the sterilizer had been shipping milk which on arrival in the city varied from two to twelve million bacteria per cubic centimeter.

The simple sterilizer for farm dairy utensils has been proved to be practical and efficient. It is hoped that the food commissioners will give careful consideration to Farmers' Bulletin 748, a special copy of which has been sent to every one of them, with a view to introducing it among the farm dairies in their respective states.

President Barney: Is there any one who would like to ask Dr. Taylor any questions? I want to say that I have seen this sterilizer demonstrated at Washington within the last year and I consider the little contrivance of great value. The fact is it is within the reach of any farmer dairyman and that is one of the greatest reasons why it is of great value, anybody can buy it, and I hope that every man connected with the dairy or health work will make note of or get one of these bulletins and take it up when he gets home. If there are any questions I am sure that Dr. Taylor would be glad to answer them. If not, we will hear from Mr. Helme. I think Mr. Helme is here. Mr. Helme's paper is on "Tolerance in Weights and Measures in Food and Drug Control Work." Hon. James W. Helme, Dairy and Food Commissioner of Michigan.

THE NEW WEIGHT LAW.

BY HON. JAMES W. HELME, MICHIGAN.

The passage of the Net Weight Law by Congress and many of the states was for one purpose, namely, to protect the consumer by putting on every closed food package the net weight of the contents therein, so that he would know just how much food was contained in such packages that were put up in such a manner that he could not readily ascertain before purchase the amount of the contents. By this he could compare the relative prices of the package foods as compared to the prices of the same foods in bulk and ascertain their relative cost. It was essentially and wholly a consumers' law and all rulings should have been made to carry out the spirit of the law.

Seldom has a food law been monkeyed with against the consumer more than this same law. The federal departments started out with a ruling that a ham wrapped up in several courses of paper and then enclosed in a cloth sack and sewed up was not "in package form" and need not be labeled with its net contents. Could anything be more ridiculous? Why should the packers object to putting the net weight on these goods except for the purpose that they were ashamed to let the consumer know how much brown paper he purchased at 25 cents a pound.

Next came a ruling that syrup manufacturers might label their cans of syrup in pounds and ounces. From time immemorial consumers have bought syrups by the quart and gallon. Did you ever hear of a consumer going into a store and asking for two pounds of molasses? Go into a grocery store and ask for a gallon of corn syrup and you will be given a can labeled 10 pounds. How many consumers know how many pounds are in a gallon of syrup? How many in this audience do? As a matter of fact 10 pounds of corn syrup lacks 1 1/4 pounds of a gallon. Why should the manufacturer object to placing the number of quarts on the label instead of the number of pounds except that he expects the package to be worked off on the consumer as a gallon and such a label would inform the consumer that he was not getting his gallon. And I have seen lard cans labeled 466 ounces, requiring a consumer to do an example in long division to see how many pounds he was getting. And we have a proposal that the net weight may be expressed in the metric system. It might just as well be stated in Greek so far as the average consumer is concerned.

In enforcing this law I believe its spirit and object should be kept in mind. Commodities should be so labeled and in such terms as the consumer has been used to buying these commodities. Thus oranges and lemons should be labeled in terms of numerical count; syrups, molasses and vinegar in terms of liquid measure; potatoes, apples and domestic fruits (except grapes, which are always sold by the pound) in terms of dry measure; and cereals in pounds and ounces avordupois. Of what use to label the net contents of any package if it gives the average consumer no intelligent information?

Now as to tolerances. Our law is uniform with all laws and provides the dairy and food commissioner may make tolerances as to small packages. Contrary to the federal department I have based the exempted small package on value and not on weight and I believe this to be correct. Some stuffs may be of high value per pound and to exempt the small package of an ounce might result in a serious short weighting to the consumer. In the upper peninsula consumers use saffron bread; it is sold in 1/8-ounce packages at several dollars per ounce, and I found they were not getting the 1/8-ounce as it was unlabeled

under the federal law. I make the 5-cent package my exception, so we do not have to label a bottle of pop holding several ounces and let go without a label a small bottle of valuable extract.

Further than this I have made no tolerance for public consumption. It would simply result in legalizing short weight packages. I once proposed to the millers of Michigan to make a tolerance of one-half pound on each 49-pound sack. One miller was frank enough to get up in the meeting and inform me that if I did every sack of flour would be short in Michigan a half pound. I saw the point.

In enforcing this law I examine each case on its individual merits and I can readily tell whether it is a case of deliberately short weighting, if it is, I prosecute. Suppose the inspector weighs 50 sacks of flour and finds every one of them uniformly short a certain amount. This is intentional. If only occasionally one is short I can attribute it to accident. Some commodities shrink in storage, others do not. All these things are taken into consideration in each individual case before starting a prosecution. Then when I get into court I am not confronted by any official toleration. We have unofficially determined many tolerances but we do not give them out for public consumption and thus establish a legal basis for short weighting the consumer.

President Barney: Now I would like to hear from any of the Commissioners that would like to discuss Commissioner Helme's paper.

Mr. B. L. Purcell: I would like to ask the Commissioner from Michigan whether or not his law permits him to include in package form a package of five pounds of sugar, for instance, that goes from the retail dealer to the consumer upon request, over his counter. That is what this law, in my opinion, is intended for.

Mr. Jas. W. Helme: Our law says "in package form." When I go to construe the law I first think of what is the object of this law and then I construe it to effect that object. Now, the object was clearly this: If a man goes into a store and buys a food commodity, there it is weighed out before him and he knows just what he is getting, provided the Sealer of Weights and Measures has done his duty. I would presume he has.

But when he goes into a store and they put out a package of food to him and he has no reasonable way of ascertaining its contents except by looking at it, why, then, I may say that is food in package form and should be subject to the Net Weight law. But, for instance, you take fruit: He goes in and there is an open basket of fruit and there is a measure and he measures it or the dealer measures it for him, why, I hold that that is not in package form. If, however, here is a basket of fruit and there is a cover on it and it is closed up so that he can not get to it and he has got to judge it by his eye, that is in package form, and he should be informed of the weight or the contents of it. That is the way I construe the words "in package form." Anything that a consumer can't get at readily before purchasing, he is entitled to know what is in it.

If he can see it and have it weighed right before his eyes, then he has got the information already.

Mr. F. H. Stadtmueller: We have the Net Weight law in the state of Connecticut and the construction of the closed package is exactly the same as the principles outlined by Mr. Helme.

President Barney: Are there any other Commissioners who would like to discuss this? I think it is a very important matter.

Mr. B. L. Purcell: Mr. President, I do not want to take up much time of the convention, but I apologize for the time that I am taking by expressing to you again my intention to take up this matter. I can foresee that there are some things that it would not be good policy that are in package form according to the construction of the gentleman from Michigan made upon his laws, to require a statement of the weight.

I believe that wrapping bread is protecting it possibly from contamination and if a man will sell a loaf of bread without a weight on it and if a man who protected his bread was required to state the weight it would certainly place the man who wraps his bread at a disadvantage. I think it would be wise under those conditions, as the law has provided, to give some discretion to the Commissioner to make some exceptions in the matter of wrapped bread and other things that might come under the same provision.

I do not, however, believe that this should be extended to wrapped meats and in explanation of that I want to say that in Virginia there is a law which requires that all foods in the process of manufacture, storage or distribution, shall be properly protected from contamination and under those conditions, owing to the prevalence of flies in the South, it may be necessary for the manufacturer of meat to protect it by wrapping. That would not excuse him, in my opinion, from stating the net weight of the contents of the package.

Mr. Frank A. Jackson: Mr. President, I would like to ask Mr. Purcell a question. Have you a bread law declaring the weight? What would be your explanation, Mr. Purcell, if you have conditions similar to those in Rhode Island, where the loaves of bread run from ten ounces to twenty-two?

Mr. B. L. Purcell: I tried to say that if we are going to stop the man from protecting his bread I believe that the public is a more important feature than, possibly, to prevent fraud.

President Barney: I notice there are quite a number of the trade here and I would be glad to hear from them.

Mr. B. L. Purcell: There is a man who has been talking with me for some time, Mr. Kirk of Armour & Co., who is representing the trade. If he is here he could give us some good information.

Mr. Dinsmore: Mr. President, I would like to ask a question. If a man goes into a grocery store and buys five pounds of sugar and the sugar is put up right in his presence, is that considered an original package and is it necessary to be marked? When a party telephones in to the store an order for five pounds of sugar and the package is delivered by the driver, would that package be exempt?

Mr. James W. Helme: I would state that in most of our cities, and I think it is quite common all over the country, when an order is made for delivery that they send along a bill stating the amount of the package which is essential the same as labeling is essential, and when the consumer gets it he can weigh it up and if it does not agree with his bill he has got his remedy through the Short Weight law.

Mr. R. E. Rose: Mr. Chairman, I did not intend to get into this discussion at all, but the question of package meat is of great interest with us, particularly the small package of breakfast bacon that is put up in considerable amount of package and very small amount of meat. It has bothered us a good deal. We have had some difficulty and the fact is we have not made a definite ruling. That was a matter of discussion before the Commission and there has been no ruling that I know of by any state or the United States Department where a package, a five-pound package of breakfast bacon, should contain four pounds of meat and one pound of package. I would like to know what has been the experience of some of the other Commissioners.

President Barney: Is there any one here that would like to answer or say a word on this matter? If not, we will pass to a paper that we dropped this morning.

REPORT OF COMMITTEE ON FALSE ADVERTISING.

Mr. George L. Flanders: Mr. President and Gentlemen and Commissioners of the Organization: This committee, as I understand, was appointed two years ago and my understanding from memory of the matter is that I was chairman of that committee. I did not attend the meeting at San Francisco last year. Mr. Allen was one of the members of the committee. Mr. Helme was another member but I do not know whether Mr. Helme went or not. I think Mr. Allen did. Whether a report was made or not I do not know, but I wrote Mr. Helme requesting him to present the conclusions we had reached.

When this meeting was called I was informed that I was to make a report on this same question this year, according to the program, so I brought forward what we had prepared, not knowing whether the report was made last year or not, and submitted it to Mr. Helme, who had approved it previously. It is short and covers this ground. We have put into our recommendations what we think in principle ought to be enacted as a false advertising law in the restrictive sense, leaving out entirely the method of procedure to enforce it or the penalties to follow a violation, leaving all that to the state. For instance, it is my observation that one state will impose a penalty of a given type for a violation and another state an entirely different one. Two states differ as to their method of procedure. We concluded that it would be going a little bit too far to recommend interference with the methods of procedure or size of penalties, or matters of that kind, but simply to recommend to the state that the following prohibitions or regulations be enacted into law in form to suit their methods of regulating matters in their own state.

SUGGESTIONS AS TO CERTAIN PROVISIONS THAT SHOULD BE EMBODIED IN AN ACT TO PREVENT FALSE AND MISLEADING ADVERTISING IN CONNECTION WITH THE SALE OF FOODS, BEVERAGES AND DRUGS.

Enacting clause. Section 1. No person, firm, association or corporation, by himself or another, directly or indirectly, shall advertise in any paper, magazine or other publication, or on any billboard or any other place of publicity, or in any circular letter or document of any character, foods, or articles entering into the composition or preparation of foods or any beverages, drugs, medicines, or medicinal preparations, or in appliance, terms or language or by any design or device that is false and misleading, or tends to deceive or mislead, as to the nature, substance, quality or ingredients thereof, or as to the curative or remedial effects or medicinal value of such drugs, medicines

or medicinal preparations, or as to any value of such foods or other products; nor disseminate, distribute or circulate any such advertisements or notices, or any book or other publication containing such advertisements or notices for the purpose, or with intent to disseminate, distribute or circulate such advertising.

Section 2. The provisions of this act shall not apply to any owner, publisher, agent or employe of a newspaper or other periodical publications, or billboard or any advertising agency for the publishing or posting of an advertisement in good faith, and without knowledge of the falsity thereof, unless such owner, publisher, agent or employe shall be notified in writing by a public officer or by a citizen doing business and dealing in similar substances or products, for which the advertised product is or may be substituted, that the said advertisement is deceptive or tends to deceive, that its publication is a violation of the provisions of this act. Any person or persons so serving such notice shall send a copy thereof to the officer charged with the enforcement of this act.

Evidence that such notice was or has been so served and that such advertisements were thereafter published or posted by such person or persons shall be evidence of an intent to violate the provisions of this act.

Now, Mr. President, we had several meetings upon this question and our final conclusion was that what we would do was to embody, and we have attempted to do it here, the principle which we think should be enacted into such a law. If we have overstepped the bounds a little, it is for you to change, but not to draw a bill that should be called a model bill to be adopted verbatim in each state, simply setting forth the principles that you think go into a false advertising bill, if you think such a one is to be adopted.

Mr. G. G. Frary: I should like to ask if in any of the states the Food and Dairy Commissioners have the enforcement of such a law as this specifically?

Mr. John McCabe: They have it in the state of Minnesota.

Mr. R. E. Rose: They have a similar one in the state of Louisiana and, in fact, several other states.

Mr. Frank A. Jackson: In Rhode Island they have a law similar to the North Dakota law putting it under the Commissioner's supervision.

Mr. R. E. Rose: If it is put under the supervision of some police authority that will not be enforced. We have got a number of prohibition laws in our state that are under the general police laws and they are not enforced at all. We had a Pure Food law long before the enactment of the present law, but it was never enforced because it was no one's particular business to enforce it and no appropriation was made for it.

Mr. Frank A. Jackson: Mr. President, we had a similar condition in Rhode Island in wood alcohol. A man who is a member of the Senate was found poisoned by wood alcohol. He was very much excited and had a bill passed there. It was put under nobody's supervision and the accidents kept occurring. In my first year as Commissioner I had the bill amended and put it under the supervision of the Food and Drug Commissioner, so that today wood alcohol, in any internal preparation for men or beasts or toilet water or perfume can not be used.

Mr. Geo. L. Flanders: Mr. President, may I call attention to this: This bill does not touch such a proposition as that. This bill, as I understand it, is to reach and remedy a condition that prevails that was not reached by law then in existence. It may be a few states have such a law, but a man having a commodity would put it up in package and label it according to the requirements of the statutes of the state in which it is to be sold, but he would advertise in papers and posters and on billboards things that were way beyond what was on the label and beyond what the facts would warrant. It is to remedy the advertising outside of a package that this bill calls for, as I understand it.

Mr. James W. Helme: Mr. Chairman, we have in this state, I drafted a bill on deceptive advertising which passed the legislature and that is a general bill in response to the request of the Merchants' Association. They wanted a general bill, which would include not only foods but all other articles of merchandise. Now, it is not made my business to enforce it, but I do so far as food is concerned, and I want to say to you that there are lots of abuses I can handle with that, but I can't get at it in any other way.

For instance, in the city of Detroit here last winter a man put up a sign, "Very best creamery butter, 30 cents." That was cold storage butter. Now, under any food law you could not get at him for just pasting that placard in the window. We got at him through deceptive advertising.

Here is another thing: A man puts into the paper, "Do not pay forty cents a pound for butter, buy our fresh churned for twenty-five cents." Well, the fresh churned was oleo. He said it was and passed it out as oleo. It was properly labeled oleo. You can't get him there. I prosecuted him for deceptive advertising. The advertising was misleading and deceptive. We locked horns and went to the Supreme Court on that and the Supreme Court decided that

that was deceptive and misleading advertising, and that the law did not violate the Federal or state constitution or any other of these things that they always do violate. That is the first decision in the United States by court of last resort on a deceptive advertising law.

A man up in Battle Creek advertises this: "Twelve pounds of potatoes equal one peck by measure, for 30 cents." Well, now, twelve pounds of potatoes do not equal one peck by measure. We prosecuted him on that. There are a lot of things now of that nature.

The appliance business, so far as medicine is concerned—dare I put that in there—suggested that for this reason: There are certain appliances, for instance, the electric belt band, where they have several batteries all around the belt generating electricity that cures all diseases. We could not get that under medicine, but you can get it under appliances. This is the reason why I had Mr. Flanders add the word "appliances," so if we found we could not get it under our drug law we could get it under appliances.

President Barney: Is there any one else who has anything to say on this subject?

Mr. C. Clay: I would just like to say we have a general false advertising law similar to the one which Mr. Helme was speaking of. We prosecute for false advertisement in newspapers or circulars and we have the inspectors take pictures of any billboards over the state which carry any false or misleading statements relative to food products or drug products.

President Barney: If there is nothing further to be said on this matter we will take up the next paper by the Hon. Guy G. Frary, Food and Drug Commissioner of South Dakota, and the title is, "Sanitation and Food Control Work."

SANITATION IN FOOD CONTROL.

BY GUY G. FRARY, SOUTH DAKOTA.

We live by eating, both literally and figuratively. Let our daily supply of food be gradually diminished and our physical strength slowly wanes. Let our food be withheld altogether, and as surely as night follows day our physical bodies must cease to perform their functions and death ensue. Figuratively, we live by our eating. We rise in the morning and prepare for the morning meal. The hours of our labor are so adjusted as to provide a period at noonday in which to again partake of food, and after the close of the day's work we must again satisfy our bodies' demands for food.

Thus our sleep, our work, our play are timed by our eating, for eat we must, and any prolonged impairment of the digestive and assimilative functions is certain to result disastrously. Small wonder then that it behooves us to look well to the quality of food which we consume for the nourishment of the physical man. Primitive man had little choice. The variety of his diet was extremely limited and with him the important consideration was quantity. With the growth of civilization and the development of our complex systems of living have come multiplied problems in connection with our food supply. The task of solving these problems has been ably taken up through various governmental and individual agencies. The splendid Department of Agriculture, in conjunction with the allied state experiment stations, has rendered great service in the development of our food supply, while individuals and corporations have devoted their best intelligence and millions in money to the perfection of methods of conserving this food supply and holding the surplus from seasons of plenty to be used in periods of less bounteous crops. Methods of manufacture have reached a high state of perfection and the variety of products now afforded at prices within reach of the most modest means is almost unlimited.

This complex development of our social life has necessarily given rise to many conditions which have rendered it expedient for us to provide ways and means for the regulation of the production, transportation and sale of food to the end that the public health may be conserved. Laws have been enacted by the legislatures of the several states and by our national Congress for the purpose of protecting, through the police power, the health of our citizenship by making it difficult to produce or to dispose of food which may be in any way injurious to health. These laws have elaborately and at length defined the adulteration and the misbranding of food and drink and have provided means for their enforcement. Were it not for these laws this Association of Dairy, Food and Drug Officials would not now be in existence. The members of this Association have in the past met from year to year and discussed and studied from all angles the problems of the adulteration and misbranding of food. In more recent years another phase of the work of safeguarding the food supply and the health of the people has gradually forced itself before you for consideration. I say it has forced itself before you for I find in the reports of past conventions that the papers on this aspect of the work have been few and on the program for this year's meeting we have but two papers related to this subject. Yet sanitation is in reality today the most important phase of the food control problem.

The word "sanitation" is one of broad meaning, inasmuch as it embraces the science of sanitary conditions, that is, of conditions relating to the preservation of health. It may be said that the prevention of adulteration is a means for the protection and preservation of health, and so it is, at least in part. But generally when we think of sanitation we think of cleanliness, that is, the state of being clean, that is, freedom from dirt or filth and from whatever contaminates or soils. Thus we see the term is a very broad and inclusive one and that it may easily include some of the forms of adulteration as defined in

our food laws. For example, a recent article dealing with this subject stated that under "sanitation of school houses and public buildings were included such topics as heating, lighting, ventilation, fire protection, overcrowding, proper seating, water supply, proper playgrounds, toilet accommodations," and many other features not generally considered under mere sanitation.

I have said that sanitation is today the most important consideration in connection with food control problems. We must not fail in our diligence in enforcing the misbranding laws; but what relative harm is done in the sale of a misbranded package of food as compared with the handling of a loaf of bread with the soiled hands of a typhoid carrier or the sneezing over a tray of cookies by a consumptive? We would violate our oath of office and betray the public trust were we to overlook substitutions, deceptive colorings or the presence of decomposed or otherwise unfit material in food products, but I assure you it is vastly more important for your health and mine that vinegar be measured in a clean vessel than that it be free from added apple solids and grain vinegar. The presence of a trace of prohibited color in a maraschino cherry served on the dish of ice cream your child buys is insignificant in its potentialities for harm as compared with the germ laden water in which the dish and spoon were washed and the towel with which they were partially dried. The sale of adulterated and misbranded food is likely to adversely affect our pocket books but the manufacture and sale of food under insanitary conditions is likely to adversely affect our health, and health is most certainly wealth. It has well been said that "in the health of the people lies the wealth of the nation." Data published by the United States Public Health Service show that the average annual loss to workers through sickness is eight to nine days. If the average annual wage is \$600, this loss totals 600,000 years each year, or an economic loss of \$360,000,000. The loss due to premature physical decline and reduction in productivity adds to the above enormous figures. This loss is largely preventable and who may say how much of this illness is due to diseases transmitted through the food or to sickness caused by food kept under insanitary conditions?

In this, the tenth anniversary year of the passage of the National Food and Drug Law, let us briefly recall some of the advances made in regulating sanitary conditions. Along with the Food and Drugs Act came the meat inspection law which has brought about such noteworthy improvements in methods of handling meats. Those of you who enforce dairy inspection laws know what wonderful advances have been made in that great industry which gives us our best article of food and the many products derived from it. Here clean production and handling are of the utmost importance on account of the susceptibility of milk and its products to bacterial infection. Manufacturers of canned goods have come to realize to a marked degree the necessity of cleanness in their plants, and their national association is no longer leaving the initiative to food officials but is urging and almost compelling members to adopt such measures as will safeguard in every way the sanitation of their plants. In 1914 the National Canners' Association's committee on sanitation reported a sanitary code which is almost a model sanitary law. In 1916 the president of this association in his annual address before the convention at Louisville said, "Has not the time now been reached when the National Canners' Association shall incorporate in its application blank not only the assurance that the manufacturer will comply with the present food laws, both national and state, but that he will also comply with the sanitary requirements of the association?" The National Association of Master Bakers has adopted a sanitary code in which the most important features of sanitary control are embodied. The National Confectioners' Association, the Flavoring Extract Manufacturers' Association and other manufacturers' associations have taken similar action. So that it becomes our duty as food officials to recognize more fully than ever before the paramount importance of sanitary control and give this phase of the work its due share of time and attention.

I shall not attempt to detail the conditions necessary to make a sanitary food handling establishment. The principal things to be provided, however, are light (including plenty of sunshine); ventilation, in basement as well as rooms above ground; suitable cases for food which need not be elaborate but which must provide ample protection from promiscuous handling, flies and dust; screened openings and freedom from flies; frequent disposal of garbage preferable by burning; refrigeration facilities for perishable food products; toilet facilities including plenty of soap and water and individual towels; clean apparel for all workers; freedom of all workers from communicable diseases, and finally cleanness and cleanly methods in every part of the establishment and on the entire premises, which can only be maintained by training the employees and by the exercise of eternal vigilance on the part of the proprietor.

How best to attack this broad problem is a serious question. First, however, there must be adequate law. The model sanitary law proposed some years ago by this body has been adopted in several states with slight variation and has, I believe, given general satisfaction. An adequate law will provide for full publicity and forewarning, together with provisions for serving notice to remedy conditions when such are found contrary to the statute. It must also provide means for prosecutions as there are cases which can only be corrected by prompt and firm action. Personally, I favor a rather light penalty for the first offenses and feel that a follow-up prosecution if the offender fails to comply after the first action is the proper remedy. Our experience, as a rule, is that justices dislike to inflict heavy penalties. But a second or third offense easily brings severe punishment.

The sanitary law must be strict in many of its provisions. The application of the principle of the "survival of the fittest" among food handlers is eminently proper. If an individual or firm cannot meet reasonable requirements as to sanitary conditions then that individual or firm should step out and give way to persons better fitted for the work. In an editorial in a recent number of the American Journal of Public Health the editor says: "The protection of our food supplies from infection and the efficient control of the acute infectious diseases as well as tuberculosis and the venereal diseases call for further legislation which shall restrict personal liberty. That such laws may

be expected was indicated recently by the Court of Appeals of the District of Columbia which declared that 'Measures looking to the public welfare are no longer tested by the strict letter of the constitution. But public opinion, keeping pace with advancing civilization, is the progressive factor which calls for an enlarged invasion of private rights for the public good and which prompts courts to give greater elasticity to constitutional limitations.' Is there any more justification for permitting a typhoid carrier to be employed in a food store than there is for permitting a butcher to sell meat which is spoiled? In the first case the carrier may pass on to me a disease which may take my life, while in the second case my senses would in all probability detect the spoiled meat, or, if it were sold to me in a restaurant and its condition concealed by spices, at best it would probably cause only temporary distress. Probably we all have prosecuted butchers for selling spoiled meat, but how many of us have prosecuted a food handler for employing a diseased helper or even caused the discharge of such helper?

Education must also be considered as a vital factor to successful enforcement of sanitary measures. Not only must the trade be educated but the consumer must likewise be taught to guard himself against dangerous infection. As long as consumers will patronize a careless, dirty merchant there is little hope of immediate betterment of conditions. Density of population must be taken into consideration in dealing with these problems. The problem of the city is quite different from that of the country town. Dr. W. S. Rankin, secretary of the North Carolina State Board of Health, in a paper read before the American Public Health Association last year, said, "Rural sanitation will be influenced by the individualism of the country. The ruralite (a term more expressive than orthodox) is individualistic; the urbanite is communistic. The errors of individualism are best treated by education; the errors of communism are best treated by legislation; therefore sanitary education is relatively more important in rural sanitation than in urban sanitation, while the reverse is true for sanitary legislation."

But, having given a model law with plans for publicity and education, and with proper penalties for violation there remains the important matter of inspectors and inspections. For without energetic and competent inspectors and frequent inspections the best law cannot be successfully enforced, but excellent results may be obtained under a very poor law if one is equipped with the right kind of men and funds for their expense. The transient nature of many persons who earn their livelihood by selling food in one form or another makes frequent inspections necessary. Furthermore, if you are able to make regular visits the persons affected feel that you are always on the job and there is not the temptation to take a chance with the law which might exist were inspections few and far between. Reports to the office should follow every inspection and where conditions require a letter from the chief administrative officer should supplement the inspector's work.

It is only by persistent and consistent effort along the lines indicated that we shall be able to properly control sanitary conditions in and about establishments engaged in the manufacture, distribution or sale of food. Local ordinances will be of much assistance if enforced, and the public is quick to respond to proper publicity with evidence of its approval. The task is an all important one and it merits our very best efforts in its accomplishment.

Dr. S. J. Crumrine: I think the paper makes an important contribution to what I believe would be a very important subject. The larger manufacturing establishments have in recent years met this sanitary problem in a splendid fashion and we have many model manufacturing firms, manufacturers of various food products that are remarkable in their equipment, turning out foods that are, you might say, entirely sterile; if not quite so, certainly sterile from the standpoint of the conveyance of disease.

I am impressed with the importance of carrying this work farther, perhaps, than we have hitherto. It is not enough to insist that foods be produced and distributed under sanitary conditions but I believe it is the province of food commissioners, certainly it is the province of the board of health, to even go farther than that, to point the way to great waste and the pollution of food after it reaches the home itself. That is a great problem.

There is another thing that we as commissioners might do and which we have undertaken to do in Kansas and which I think we have been all more or less derelict in doing, which is perhaps one of the most important things we could do, and that is to insist in the correction of certain vile, insanitary and dangerous conditions which we find in the average small country towns, the unsewered towns or cities. In my judgment it is futile from a sanitary standpoint to insist that the floors be cleaned and the shelves kept dustless and the food products be arranged in the store in a manner which will comply with the sanitary laws, if back of that establishment is a vile, open, insanitary outside toilet, by which, through easy means, and through means with which we are all familiar, dangerous pollution can be conveyed to the products in that establishment.

I have instructed my inspectors a month ago, two months ago, in the beginning of summer, that if they didn't do another thing this year, that every place that had an institution of that sort back of that establishment over which we had control under our law, to give an order that that place must either be abolished or be fly-proof; not a screen door, that is not fly-proofing a toilet, but actually fly-proofing that toilet.

We have gone further. We have taken it up with the health officers in a propaganda of going over the state, outside of their food and drug establishments, to accomplish that purpose. So I say, we must go further.

The manufacturers of food products pretty generally have met the situation in a definite way. We must look after the local conditions, the condition of food in the home and back of these small establishments in the unsewered towns.

That other problem of the care of food in the home is a giant problem and we have undertaken to meet that in a way. I am glad that Miss Johnson is here today and I want to ask her to say something on that problem.

Let me say in my address before the State Board of Health two years ago it appeared to me then that we were only half

doing our work unless by some means or other we could carry definite information into the homes. We must be in touch with the people, not necessarily the manufacturers of foods; we are in touch with them and have been in touch with them. And so it was recommended that a study pamphlet be arranged which might be arranged for a study of the sanitary problems in the home and some means of publication and distribution to the end that this important thing might be brought to the ones who are in the home, who are responsible for the preparation of our food in the home. That committee has the advantage and the honor of the preparation of that pamphlet by Miss Johnson.

Miss Johnson is here this afternoon and I would ask, Mr. President, I think it is perfectly pertinent to the subject in hand, I would ask that Miss Johnson tell us something about the plans of the committee in the distribution of this literature. May I also say that I appeal to the commissioners who are here assembled to undertake to place this pamphlet in the hands of club women or other organizations in your communities. The whole thing is digested and outlined, it is made easy of access and is a bibliography on all the subjects under discussion. I am asking you today for your co-operation in this splendid work. I would like to hear from Miss Johnson.

President Barney: This is Miss Helen Louise Johnson, of Wharton, New York, who will address you tomorrow.

REMARKS OF MISS HELEN LOUISE JOHNSON, WATERTOWN, N. Y.

Mr. President and Gentlemen—Dr. Crumbine has touched upon the greatest problem, probably, that is presented in the matter of food work from the woman's standpoint. It is a matter, so far as pure food is concerned—I think most of you here do not need to have it emphasized—that is of economic concern. The woman has been, unfortunately, taught differently. She has been taught to believe that adulterated food was something like fly-paper or fly exterminators and if she got caught in it she was poisoned or something, whereas the clean food problem should be before her all the time.

The General Federation of Women's Clubs during the past two years changed its entire method of procedure in the matter of food sanitation, trying to take up that food sanitation work from the point of view of clean food, and we are trying to do one thing which this committee has been very greatly assisting, helping the women toward this point of taking away that word "pure" from our vocabulary, if possible.

The word "pure" as applied to food is capable of forty-eight different definitions, and it does not mean anything, whereas the problem that is before us is the question of safe food. That is the thing in which the commissioners could help very much indeed. Instead of talking about pure food all the time, talk about safe food, because safe includes a great many things.

It includes the thing that Dr. McCollum was talking about this morning. It includes the balanced rations; so far as we know it includes everything else almost, this question of clean food.

Now to get the woman to know that she is responsible for a large amount of that part of that. I suppose it is just as much your part to enforce laws. As Dr. Crumbine said, it is the greatest problem that is before you. Most men know how to get next to the women—they do not have to have a woman tell them that. They perhaps know better than the women do. At the same time they are inclined to belittle her knowledge at the present time. This was done yesterday when one of the commissioners said that if you put acetic compound on the thing that no woman would know what it meant. Well, that is not true. Every woman knows what acetic compound is.

I think what he meant to convey was that was not the information that you wanted to give, that apparently is beside the point. The point is that the woman is very eager. She is very eager to be told what to do and she has not actually known that she is to blame for a great many conditions. She does not know that the milk that reaches her—I think that I had better cite an instance:

Before I came away it was hot in my own home town and I got up quite early and went into the garden. When I came back the milkman had left some six or seven bottles of milk on the back porch. We do our own work in our home. My sister was inside the kitchen getting breakfast and she had been about for at least three-quarters of an hour. That milk was taken off the ice and put in this hall and the sun was shining on it. As I came in I collected two or three bottles and brought them into the house and my sister said, "Please don't bring them in." I said, "I certainly will." She said, "Please don't, you will put the milk in the wrong place."

Now, there are a good many housewives that are like my sister; they are so afraid to pick that milk up and put it in the refrigerator that they will put it in the wrong rack. My sister did not realize that ten or fifteen or even eight minutes in the sun would make the biggest difference in the keeping of that milk and she would come back at that milkman and say, "Oh, the milk is not as good as it was, there is something wrong with it."

How to teach us women is a hard problem. I had the great privilege of working with Dr. Ryan and Dr. Crumbine and Dr. Whitney and I think Dr. Whitney's method in Indiana is extraordinarily good. I think he is getting hold of the women as comparatively few of us are. A lot of people there, the manufacturers and the dealers in foods in Indiana, seem to hate Dr. Whitney and I think it is on account of his having been after them so, but the women like him very much and they like his method of doing things. The reason is he always takes the pains to explain why he gives the details. He does not just say "You must do this thing" or "This is the law," but he tells them why.

What I am getting at is this, that if the women think they need this, it will help them very much. Now, how to get them? We have got to get at them through their organizations; that is the way we get everything nowadays, everything has to be organized. You have to get to the women through organization, through the clubs, and there are clubs everywhere, women's clubs as well as city clubs. They will disseminate this information for you. Women make programs for the clubs every year and they are always eager for information. They are

always eager for help in making programs and they are also willing to change that program from year to year, just change the words of it, the title of it, to say the same thing over and over.

If you want to get at the women in your state the first thing is to get at the women who are at the head of their State Federation. Do not ask them for co-operation, do exactly what you want them to do to you, say that you want to co-operate with them. I suppose that is the psychological way. Say that you want to co-operate with them and ask how you can serve them giving this knowledge that has to be given out.

A program such as we made was made up by Dr. Crumbine, Dr. Whitney and Dr. Green. We would like to give this to women because they want programs. They want programs for club meetings. A club would have twelve meetings during the year, and you could have a public health program just as well as a food program. When it interests the woman it is her problem just as well as yours. You keep it to yourselves too much; it is hers just as well.

I want to say I am going to talk about co-operations that co-operate. You have not co-operated with the women. Now you have got co-operation, but it is not what you think it is, and she does not know what makes dirty food. Of course the difficult thing in this is that we get these women who are uneducated, we get to the women who are in crowded centers, who do not know how to do these things. After all, you can always reach them through the papers, you always reach them through the children, and they realize that it is a health concern. It is going to make a great deal of difference with the lives of those babies and she realizes this.

I suppose even the plague of Egypt that is going on in New York City at the present time where the first-born in the family seems to be killed by infantile paralysis is almost a blessing in itself. New York City is cleaned up, and once cleaned up in its history it is not going to remain as it has been before, so we could almost look on it as a blessing.

Now, when those things come, if we use them in the matter of the education of that woman—I have great feelings about this matter, because it always seems to me, I am going to say it without meaning to be discourteous at all, but it always seemed to me that the men treat this matter of co-operation with women very much as they treat the suffrage question. Of course, if we want co-operation badly enough you will give it to us when you are convinced that we want it badly enough, and you want to give it to us very much as an inferior. You are a little suspicious of us.

I am not using that sort of suffrage argument, but this is the way you approach the woman in the matter of co-operation. You try to give her this thing instead of really trying to co-operate. Co-operation is actually started by you. Sharer is what co-operation means. Now, if that woman once realizes that it is co-operation you want, that you are willing to share your knowledge with her, I think you will get co-operation from her. Is that what you want me to say, Dr. Crumbine?

Mr. J. D. Mickle: I don't think that we have reached a pure food or clean food millenium at this time. The truth is that we are here at this time discussing these problems, and we are pleased to listen to just such papers as Mr. Frary has presented before us today, also to the matters brought out later by Dr. Crumbine and again by Miss Johnson, and I am wondering if that millenium is ever going to come before the other millenium comes. I was glad that Mr. Frary took the position that he did, that we sometimes, even we commissioners, strain at gnats and swallow camels. That is, to use his own illustration, these small violations of a label misbranding or even a small adulteration—what comparison has it to that dirty refrigerator out there in the back of some restaurant, or that filthy slaughter house down here? Those are the agents of the undertaker and I believe that you could well lay more stress upon our work along that line.

Coming directly to the remarks of Dr. Crumbine and Miss Johnson preceding me, I want to express just a little bit personally that I have been trying to get this co-operation with the women organizations in my state and I am not ashamed to stand up here before you and tell you some of the results of it. I can't say that in all cases it has been successful. In some cases, however, it has been very successful. Perhaps it might not be out of place for me to give just a little bit of my experience, and I do it in all modesty and in all honesty, realizing that the ladies are present.

I have had experiences where we went, in seeking to co-operate with women's organizations in various towns, and in some cases it has led to them trying to run the work for us. I would frequently find one woman identified in one certain club—she was not the bellweather. This gentleman has the proper expression for it, leading lady. Again, on the other hand, we have found women's organizations to have brought to us great work and great assistance in our work.

In one case we went on an inspection tour through a certain section in our state and I invited committees from the women's clubs to accompany us on this inspection tour. We went into one bakery and that man had a splendidly arranged salesroom, everything clean and nice, but immediately you got beyond that and got into the manufacturing shop there we found everything in disorder, not a single light, either daylight or artificial light, and there were foodstuffs gathered promiscuously about the place and the cat had possession of all of it. In the bakery proper, I am not going to take your time to describe it, you commissioners have probably found some of these places in your own state and know what they are like, but when those women came in there that man knew what was up. What is that, "Telephone, tell a woman and it is all over town."

That man came to me and he said, "You have ruined my business." I did not do it, the women did it. He did it himself but the women brought the results in that town.

Then again, we need to go into the home, as Dr. Crumbine says. There is never a week but what two or three women come to laboratories packing in articles of food and saying that it is rotten, it is adulterated. In ninety-nine cases out of a hundred the cause of the condition of that article of food is right in their own homes.

Now I do not say that to disparage the housekeeper at all, that is not the best class of housekeeper that brings those

things to you. Just take the common article of butter: We have from three to five cases a week, perhaps. They come in and say that this stuff is oleomargarine or tallow because it has been left in some cases in refrigerators alongside of onions or somewhere else, and it has taken these flavors up and deteriorated in that way. I say that there is a vast field that we must develop along sanitary lines far more than ever before because that is the field.

Our adulterations have ceased. The state food law has done those things; but we must go on in sanitary inspection work. When they talked here the other day about making a chemist an inspector, why, bless my soul, if I were a chemist, a graduate chemist, a graduate physician, a graduate dairy man and all the others, and then to wind up, a good wind-jammer of a lawyer to fight my own cases, I would have made a far better commissioner than I am today. I wish I were all of these.

Mr. F. H. Fricke: Mr. Chairman, Missouri is not first in everything but I believe that Missouri was first in putting the women to work as inspectors. Over four or five years ago that has been the method in the state of Missouri. I do not want to defend the women, I do not think they need it. I have personally been requested by the organizations of St. Louis and the state of Missouri to permit the women to help enforce the food and drug law, the sanitary law of our state. I consented to their wishes. I formed an organization in St. Louis and called it the Pure Food Committee of the Consumers' League. That was the start. I had fifteen members of this committee to start in the work, and I divided them into groups. I brought some of my inspectors from the state into the city and gave each inspector two of these women to accompany him in the fruit establishments. At first we did not receive very pleasant receptions, but gradually the opposition disappeared and it has proven very successful, so successful that the City Health Department, who at first did not care to co-operate with us in this work, have seen the wisdom to appoint them as city inspectors, although they do not receive one penny for their services. They are permitted to put in as much of their time as they see fit each week.

We have now fifty-two of these inspectors in St. Louis. St. Louis is quite a large city and there are quite a number of inspectors when you consider that the state of Missouri, the Food and Drug Department of the state, permits only seven inspectors for the entire state, covering 114 counties. Why, it is almost impossible to make the entire rounds even in my term, for years.

Another great assistance that I got was through the State University. They have a department there called the Home Economic Department and they have a woman who travels through the whole state lecturing on wholesome and clean food. She in turn forms organizations in these different towns that invite me to come there and conduct a school of inspection and in that way I train all the women into my way of inspecting food establishments and this has proven a very good thing.

There is one thing, however, that you have got to be cautious of. Frequently you get to a town where they have what they call a Society of Civics and Health, they have another one, a Literary Society, and then they have another one that is perhaps a Consumers' League or a Housewives' League. You want to be very careful to get the best one of the societies, as otherwise you have a jealousy there and they don't work as they would had you chosen the very best one.

Mr. T. L. Calvert: Mr. Chairman, this is a subject that I have been very much interested in and while I am a young man in the work, I have only been commissioner of Ohio for a year, I feel that when I had been in there a very short time it was not the pure food stuff that I was afraid of but the sanitation.

I believe there could be more work done along the line of sanitation than any other. You find that in your bake shops, slaughter houses, hotels, restaurants and all those things the conditions are very bad, and very much as the gentleman said here about the bake shop. I have in mind one confectionery shop where I went and everything in the front was polished up so that you could see yourself and you hardly thought it worth while to go any further. But when you got into the back room I think it was one of the dirtiest rooms that I have ever entered. I think we are doing good work along that line.

Now, I have always been an advocate of going to the foundation, the bottom. I believe we ought to go first where the goods are manufactured and see that the conditions are right there. Take especially the dairy interests: If the sanitary conditions are not good around the dairy and they are filthy so that the milk becomes contaminated before it leaves there, or it is not properly cooled and gets an off flavor, it is impossible for any creamery man to make good butter out of it. I feel that it is the foundation, that we ought to start at the bottom. We are doing all that we possibly can.

We do not have enough inspectors, of course, to get to all the dairies and we hope to have more by the next legislature and expect to take up the work thoroughly.

Somebody spoke about when the food gets into the house. I think that is very often the case. I have a call almost every day from some one who has bought something from the store that was not good and nine times out of ten, when you investigate, you find that it was their fault instead of the merchant's. We have been trying to assist the housewife to be more careful in buying. There are too many of them depending on the telephone and the child to do their purchasing. I have recommended through circulars and expositions or anything going on in the state that every housewife makes it her business to go to the store where she does the purchasing once in a while and look around to see what condition things are in, stick her nose into the refrigerator and see if the aroma that comes from there gives her a good appetite and if it does not let the man know it and if he does not clean it up why stop dealing with him.

I believe that there is a greater work along this line than there is in the pure foods, because we can get at those on the shelves and see just what they are.

Mr. Y. M. Moore: The work on sanitation in Alabama is primarily under the supervision of the health officer of the State Board of Health, who administers the work through county health officers. Under a special statute the larger municipalities maintain inspectors who inspect all such dairies,

slaughter and cold storage houses of the state and their products as to business in their respective municipalities.

The work of food control is administered through the Pure Food Bureau of the Department of Agriculture. As I have been connected with the food control work only a few months I cannot give definite information on the sanitation work in Alabama. However, I can safely say that we have observed much improvement along sanitary lines during the last two or three years. I feel safe also in stating that while average sanitary conditions obtain in Alabama yet much more effective work must be done before entirely safe food can be offered to the consumer. Before the desired ends are reached we will have to increase appropriations and the work of sanitation and food control may necessarily be consolidated under one head.

Mr. Thomas P. Sullivan: Mr. Chairman, the question to my mind of sanitation and regulation does not seem to permeate the minds of those who are here to control the situation of distribution. They all get at the storekeeper and the manufacturer, who are easily located, and usually try to do what is right. They overlook the real offender, the itinerant vendor. We have recently, through the Governor, passed an ordinance in Chicago regulating the handling of fruit measurements in a sanitary manner which requires them to put it under glass and behind a screen of twenty measures to the inch, something like that. The man that went through the alleys with his wares uncovered through the filth and manure piles was unmolested by the officer who had charge of the enforcement of the law. This officer sought the best stores in Chicago along the north shore, high class institutions, sanitary institutions, glass fronts, clean as crystal, and everything inside. He got after those men because they did not have the plums and grapes and peaches under glass, while the doors were screened and the fans going inside and every measure that could be used with good judgment for sanitary conditions was carried out by this man. This man was prosecuted by our Department of Health in Chicago and the itinerant vendor was neglected. He said he could not find him.

I recall here an instance last week or so when during the severe hot weather many horses were felled in Chicago, so many, in fact, that they could not be removed promptly by the Health Department, and lay there for a day or two all puffed up. Along came a wagon there with a lot of cherries dumped into it, I presume the California variety. The vendor was down getting out his wares for sale and the flies mostly left the horse and went on the cherry wagon. This man is immune from prosecution.

The whole theory is, the storekeeper, the manufacturer, and the housewife. To my mind it is a matter of educating the housewife about this itinerant vendor.

Mr. F. H. Fricke: I want to take exception to the remarks made by the previous speaker. It is just the opposite in Missouri. We find that when we go into a business house, let it be small or large, that we can discuss the sanitary law with the proprietor and let him understand what the requirements are. When it comes to an itinerant vendor, the chances are that it is a Greek or some foreigner, he cannot understand English and we make him understand by prosecuting him. It is not necessary to prosecute in every case. I don't want to prosecute if I can get them to comply with the law. But when it comes to this itinerant vendor, as you mention, it is absolutely necessary to prosecute them. All the commissioners do not understand that.

Furthermore, while I have the floor I want to say that it is not only the up-to-date and the good-looking stores that these women go into. When I sent out by route of inspection to the different towns the women's organizations there are good enough to provide me with an automobile. I usually take one or two inspectors along and we do not only investigate or inspect stores but we go out into the country and inspect dairies, and, believe me, that is where I find a lot of work has got to be done. It is due to the women of Missouri that in the past two years we have had twenty-seven model dairy farms built, just through the agitation of these women.

Mr. Thomas B. Sullivan: Of course, I described Chicago conditions as they are today. I believe politics is the cause of the conditions. Men not only peddle through the streets through all kinds of filth, but I believe their sheds in there, also their fruit receptacles; it is their home as well; they sleep there, horse and all.

Miss Helen Louise Johnson: I suppose in one way or another we are all from Missouri and have to be shown. Perhaps the best way is to put the itinerant vendor out of business. Within the past few months I had the very great pleasure of seeing a set of films which have been introduced in Philadelphia, which are the most educative things I have ever seen. They were produced by the School Lunch Committee. They took pictures of the actual conditions of the children as they came out of the school. They took a school in one of the poorer districts of Philadelphia and they followed the man to his home, the man who was selling pretzels and the fruit and the candy and the other things that are sold to the children who buy a penny's worth at luncheon time or at recess, and I don't know how they induced the man to keep on in that way while they took the pictures of him. They apparently did.

He went to sleep with his goods. He was not the only occupant; he was the only two-legged inhabitant of the couch that he was sleeping on, but there were other inhabitants, obviously. He was very restless and scratched his head. I will describe it as I saw it. He wiped his nose with his fingers and then polished off the things into the basket. He did all the disgusting things in the picture that we know itinerant vendors do, and handled food, and then the children, some very good looking children, some well dressed children came along and bought the stuff. There are three reels of that and they are the most educative things I have ever seen. If there are women in those families, Greek or Polish or whatever they may be, who can not understand English, could see films of that kind, if they knew what cleanliness meant and what dirt meant by seeing, why, being from Missouri and having been shown, it would certainly teach them as nothing else, no words could teach them, and it is perfectly possible of being done, I believe.

While I am on my feet I want to say something about the women. Now, I am a woman and they do not like to have men

criticize their own sex. There are difficulties with both of us or with each of us. It is a pretty unsafe thing to take a group of women and let them loose as food inspectors. It has been my experience that it is harder to hold them back than to push them on. Once started out on a campaign of cleaning up some one else's yard it has been perfectly delightful that mote gets into the other person's eye instead of into our own; it is a very fascinating thing.

I think the proposition on which we started out here was how to get to the individual home of that woman, each woman's home, my home, the other woman's home. This milk that was on our back piazza—why don't you go to that woman's refrigerator again and again and see if there is something the matter? Why don't you say, "I want to go home with you" and see if she has put the butter above the melon or the melon above the butter; whether a draught of air is going right in or wrong? She does not know whether that thing should be on the top shelf or the lower shelf. It is little things like that that a woman has to be taught; people have to teach her, and it is unfortunate that I can not tell the method of how it should be done.

Dr. David Klein: Miss Johnson, may I ask you a question? Is it prevalent for the itinerant vendor to drive his wagon through the alleys of the large eastern cities and for well-to-do people to go out and patronize the wagon?

Miss Helen Louise Johnson: It is not customary in the larger eastern cities for the itinerant vendors, or whatever nationality they may be, to drive through alleys with uncovered wagons and sell vegetables and fruits in the well-to-do districts. There are a great many vendors of all sorts of fruits and vegetables that drive through in the small towns, in the small cities, for instance, in my own town, and I see there are no municipal ordinances concerning them at all.

Dr. David Klein: May I not suggest that the women of these well-to-do districts who, perhaps, are thoroughly acquainted with the conditions in which the vegetables and fruits are handled and if they are fully acquainted with the fly problem would not patronize those people who go through the alleys were it not that they want these foods conveniently near and they want it cheaper possibly than they can buy it at the stores and they would continue to patronize these vendors who travel through alleys with unprotected wagons. That has been our experience in Chicago and other Illinois cities.

It is not only the man who gets the pennies from the school children, but it is the vendor in the alleys in the well-to-do districts, the aristocratic sections of the city, not the uneducated ones.

Miss Helen Louise Johnson: I can't agree with you, Dr. Klein. My reason of speaking of those films was merely to indicate that there are certain methods of education which are very direct, but it seems to me that simply because a woman lives on Fifth Avenue that does not mean that she is an educated woman, particularly it does not mean that she is educated in sanitary control work. On the contrary, there may be very many women living in a poorer district who know far more about food than the woman who lives in the well-to-do district, who have nothing to do with it. As soon as the woman really knows I think she would stop it, that she would not uphold the man in his practices if she really realized what they are. I know of no better way to get it before either the man or woman than the pictures of it as it actually exists.

Dr. David Klein: Mr. President, may I ask Mr. Fricke a question? These women that you have as inspectors in St. Louis, have they official authority to make inspections?

Mr. F. H. Fricke: They have from the Health Department.

Dr. David Klein: Are they duly constituted officers?

Mr. F. H. Fricke: The law of the state of Missouri provides that the Commissioner may appoint his inspectors not to exceed six in number and one Deputy Commissioner. I have, therefore, no power under the law to appoint these women as officials in the State Department. To overcome that I asked the city Health Department to appoint these women as city health inspectors and they did so. Now, I would like to ask Miss Johnson a question: Do you consider this a good system or a good way of imparting such information to the women and the men as they have done in St. Louis last winter?

All last winter the Consumers League, of which I spoke—it is one of the large organizations there, I understand it is a national organization and this is a branch—have delivered one lecture each week in five different parts of the city; five lectures each week, in other words, concerning sanitation of foods in their own homes. That is what we have done.

The State University of Missouri sends out its lecturers to the women of the small towns conducting the same lectures.

Miss Helen Louise Johnson: Of course any educational way using the right people is a good way. We are willing to be helped. By the passage of the Smith-Lever law those extensions have to do with the small town, with the rural districts, and I think I am right in saying there is a great deal of unsanitary conditions in the home in the rural districts that have to be overcome quite as well as in the city.

Those women who are going out under the Smith-Lever law, like the extension workers from the agricultural colleges, when they are fully aware of the fact that this is one of the conditions that they must meet—the only reason I am afraid of the women inspectors as a lot is that they are very much fired with the cause, they are inspired with something that is delightful but they really don't know what it is. It is not a thing that they study the way you people have studied or the way that I have had the opportunity and the privilege of studying it. They are very much interested in it for a time, but I can assure you that if I had a store and six women inspectors came in to see me that day that I would want to either shut up shop or shoot somebody; I think most men would.

That is what would be the trouble. You can not control these uncontrolled inspectors. Mr. Ladd of North Dakota has a woman inspector in North Dakota that is doing most significant work. Dr. Abbott, before he left Texas, appointed a woman down there who has been doing wonderful work in Texas. Of course, the woman does get nearer the women, there is no question about it. She can get nearer to the women, but I think she ought to know something about the problem.

Mr. F. H. Fricke: That is what I said a few minutes ago. These women that are inspecting for me I think know some-

thing about it. You speak of Miss Darwin, now of Texas. Dr. Abbott four years ago sent Miss Darwin to me. Of course, she understood that I was instructing women in St. Louis in sanitary inspection. She came to St. Louis and I did take her with my women inspectors in St. Louis. She went back to Texas and Dr. Abbott tells me she is one of his best inspectors in Texas. Now these women in St. Louis are not uncontrolled. They must take a report to the City Health Department. In the first place they have districts and then she must report what places she was going to visit on such and such a day and the hour of the inspection and what she has found and if it is necessary must appear in the prosecution. She is absolutely controlled by the City Department.

Miss Helen Louise Johnson: That is all right. Now we are coming back again to the store, back at women inspecting the stores. Are those women inspectors going to educate the rest of the women in St. Louis as to conditions in their own home? In other words, we started out with the question of how we were going to teach these women who did not know how to take care of the food properly when it reached her home. If one had a lot of women inspectors who could get at conditions in the home, would it not be reaching after all the kernel of this question that comes regarding safe food?

Mr. Jas. W. Helme: I do not want to defend the women inspectors, but I have got a woman inspector on my regular force and I do not know of any objection why most Commissioners do not appoint on their regular force a woman. I have got a woman inspector in this city and a regular food authority that has been doing business here two years and I have not noticed any wild hysteria on her part. She did her regular work just like men would. I think she did better work than any man inspector I had here in town, because she had not stopped at the saloon to take a drink, or to talk politics at the hotel.

President Barney: Now we have with us the former President of this Association, Mr. James H. Wallis, and he is to lead the discussion for the trade and we will hear from Mr. Wallis now.

DISCUSSION BY MR. JAMES H. WALLIS, UTAH.

Mr. President and Gentlemen of the Convention: First, let me express my appreciation of the kindness of the Executive Committee in inviting me to lead in a discussion of this most important subject, which has been so admirably covered by Commissioner Frary.

To me, as I view the situation, there is nothing more vital and more necessary in food control work at the present time than sanitation. If I may be permitted to say so, I would unhesitatingly state that more time could be profitably spent in a discussion of this subject with a view to agreeing upon some effective scheme which would be of real value in protecting our foodstuffs from every kind of contamination, for but two papers appear on the program of this convention discussing this subject in any of its phases, and another year will roll around before an opportunity is again afforded this organization to give it any consideration.

At the outset of my paper I want to submit for your consideration this thought: Is it not possible to appoint a commission from the most experienced members of this organization and ask them to draft an amendment to the adulteration clause of the Food and Drugs Act, both state and Federal, which will give the Commissioners that real power which most of them now lack in order to remedy the condition which we have to all admit they now appear powerless to control?

In the paper by Commissioner Smith of Utah, he points out very clearly the inconsistent operations of the same powers conferred upon Commissioners with respect to the enforcement of sanitary regulations in the protection of foodstuffs. He makes it very clear that Commissioners are often at a great disadvantage in having the legal construction placed upon the statute by state attorneys. A state executive naturally appeals to this official in doubtful cases for a legal interpretation of the statute under which he operates so that he may be protected in his efforts to enforce the law, and when he receives such legal opinion and it circumscribes his operations, it often discourages him.

Some Commissioners, however, proceed without seeking this advice and act upon the statute as they see fit. In many, if not most of such instances, they are successful in their position, but sometimes lose their cases because of the viewpoint taken by the court in defining the meaning and intent of the law.

It seems to me, and always has seemed, that what is needed more than anything else is some concise definition added to the adulteration clause of the act under which we operate which will make certain conditions under which food is manufactured, transported, offered for sale, or sold, *prima facie* evidence of its contamination, so as not to be compelled to first prove that consumers have been made ill by eating of the foodstuffs before proving that such have been adulterated by contaminating conditions.

It must be admitted, of course, that some of the states have made great progress in this matter of sanitary protection. Indiana, Maine, Kansas, North Dakota, Missouri and some few other states must certainly be proud of the excellent results accomplished under these laws. Some of the states have adopted what is known as the Model Sanitary law, supplementing and harmonizing with the law prohibiting adulteration and fraud. However, only a few states have succeeded in placing this law upon their statute books. The experience of some of these states shows it to be in need of revision as, of course, is the case with all of our initial legislation along these lines.

When we consider that a great state like Pennsylvania is absolutely helpless, as admitted by Commissioner Faust and his Attorney General, to protect its bread supply from contamination because of this lack of statutory power, we can readily sense the necessity of some uniform action as recommended in the opening of my paper. Some few states have given the Commissioner power to order changes made to remedy insanitary conditions found upon inspection, fixing a time limit in which such changes shall be made. The official, however,

can not remain in the town in many of these cases at the state's expense until such changes are made and therefore has to take the word of the owner of such establishment as to having done the work required, such a place of business remaining open to the trade in the meantime.

In the case of slaughter houses found in such an insanitary condition as to preclude the manufacture of foodstuffs, we unhesitatingly close them up until such time as they are put in proper sanitary condition. Why should not the same power be exercised in the case of restaurants, bakeries, groceries and other similar food factories? It might be that a provision authorizing the State Commissioner to make public warning in local newspapers that such a store has been inspected and found insanitary, would have some wholesome effect in producing better results. This, of course, should only be done after patience has ceased to be a virtue in an effort to have such places kept in proper condition. This would be more effective than prosecution and fines. So, as long as people will patronize the dirty grocery or bake shop we shall always have this problem to contend with, and it will only be through some such drastic provision in the law that the condition will be remedied.

We prohibit the sale of milk produced under dirty conditions or from unhealthy cows. Why, then, permit the store to remain open that persistently sells groceries and foodstuffs exposed to flies, manure dust, infected sputum and other contaminating conditions.

I unequivocally endorse what Dr. Frary has so truthfully stated, "If the individual or firm can not meet reasonable requirements as to sanitary conditions, then that individual or firm should step out and give way to persons better fitted for the work." Of course, there is but one way this can be effected, and that is by the Commissioner having power to close up such places of business. Personal liberty must be circumscribed when it comes to such an important matter as public health.

Human life is more important than the dollars and cents which is too often the only consideration of the unscrupulous or ignorant merchant. Some may argue that such arbitrary powers would be abused by the food official. Granted that there may be one or two such scattering instances of such a law being unjustly exercised, still such instances would be very rare indeed for food officials generally are patient and long suffering and the day of harsh methods and notoriety crusades has passed forever.

Another suggestion: Some of the Food Commissioners have not given enough consideration to the fact that in the larger cities of their state the charter powers granted such corporations are very liberal indeed in matters pertaining to the protection of the general public health. If some co-operative work was done with these city officials in having sanitary laws passed and enforced, it would bring about a better condition than exists at the present time in some of the states. As a result of this co-operative scheme the State Commissioner, without any expense on his part, would have a great deal of help.

I feel that much is to be said in commendation of the magnificent work that has been done along lines of sanitation by the manufacturers of the United States. They have shown by their voluntary efforts that they believe squarely, heartily and unqualifiedly in food sanitation. As stated in a very valuable bulletin recently issued by the American Specialty Manufacturers' Association, the manufacturer believes in enforced food sanitation for the following reasons:

(a) Food sanitation in itself is a right and just practice. If modern commercial conditions have produced establishments where proper sanitation does not prevail, then a compulsory regulation is essential. But aside from the field of duty, it is the ambition of the representative food manufacturer, truly sensible of his profession, to effect the most perfect degree of sanitation. That ambition is elemental, inherent to the true spirit of the calling. Sanitation is the essence of idealism, whose realization brings pride, pleasure and satisfaction unsurpassing. Food sanitation is a righteous thing in principle and practice.

(b) The manufacturer owes the duty to the public he serves, from whom he receives his living, to supply only those articles which are unquestionably pure and wholesome. Conditions militating against purity and wholesomeness have no justification. The public health and welfare is involved.

(c) Enforced food sanitation is in the interest of the food industry and of every manufacturer therein. General food sanitation creates confidence in the consumer. The merited confidence of the public in foods commercially produced is beneficial beyond estimate to the industry. Discovered unsanitary conditions of manufacture becloud the good name of, undermine the confidence in, and injure the entire industry. The higher the standard of the industry, as a whole, the greater will be its prosperity. Permit the public to suspect that certain foods are being produced, to some extent, under improper conditions, and the whole industry suffers.

The competition of a manufacturer able to produce more cheaply, by reason of improper manufacturing conditions, is unfair and hurtful. And this unfair competition is, at times, of a serious nature. Furthermore, with the development of the law of civil liability, and the possibility of the payment of heavy damages for injuries caused by the consumption of unwholesome foods, the importance of sanitation becomes more and more apparent from the standpoint of self interest.

Finally, proper food sanitation leads to greater conservation and utilization of the available food supplies, the reduction of waste to a minimum. From a purely selfish standpoint, therefore, food sanitation is a good business policy for the manufacturer. It builds up the most important asset of a commercial house, its good will. We believe, therefore, that there can be no better friend of the food industry, and no greater a promoter of its lasting prosperity than effective and equitable food sanitation laws. The public welfare value of such laws is not to be estimated over their public value.

(d) Enforced food sanitation is a social right due to the employee. It is encouraging to note the ever broadening conception of business generally, toward matters involving social justice and the general public welfare. The spirit of responsibility in business toward society is more and more apparent.

This altruistic attitude is due, largely, to the humanizing of the industry through organization contact whereby the best sentiment of the industry is crystallized into a definite opinion. The manufacturer owes healthful conditions of production to his employees. To build up strong and healthy men and women, to blend the sunshine of heaven with the sunshine of man, to add to the health, welfare and happiness of this and the following generation, is a true object of the food manufacturer. This splendid conception is not merely humanitarian and just, but a matter of good business. The nearer manufacturing conditions approach perfection the higher rises the economic efficiency of the employee."

I was glad to hear the note of warning sounded by Dr. Alsborg at this convention to the effect that there was a disposition to relax in the matter of prosecutions. While it is a very laudatory motive to educate manufacturers and dealers to respect the law, yet there are those classes which have to be prosecuted. The law should be enforced in justice to the legitimate manufacturer and food purveyor who is ever on the alert to safeguard his products from the contaminating conditions that always surround them.

Some officials are too prone to avoid prosecution of offenders; they fear perchance of getting the name of public prosecutors, or for fear that he may fail in his prosecution. If there be any such official here present, let me say as a result of several years' experience that in almost every case where prosecution fails the object sought for has been accomplished by the opportunity afforded to give to the public the evidence secured which warranted bringing the prosecution.

As is possibly known to all of you, I have been employed by the State Board of Health of Utah to act as adjudicator in a state-wide contest which that body has inaugurated for sanitary improvement of its cities and towns. Every condition of sanitation affecting the general public health was gone into, water systems, sewer systems, garbage disposal, food factories, food markets, public buildings, school houses, and even the homes and surroundings of the people; all were inspected with a view to determining their sanitary conditions.

The great improvement noticed the second year as compared with the first adjudication was really remarkable. In this work it was discovered that there are conditions surrounding the manufacture and selling of foodstuffs which should not be permitted.

If the food laws of the different states were only amended in one particular, like that secured by Dr. Abbott for his state when he was Food Executive, it would work wonders in improving conditions. You all remember, those of you who were down at Mobile, Alabama, two years ago, that Dr. Abbott stated that he was hedged up all the time in bringing prosecutions for selling adulterated foodstuffs by the lack of a proper definition of the word "filthy" in that part of the law which defines a food to be adulterated "if it consists in whole or any part of a filthy, decomposed or putrid animal or vegetable substance." He went before his Legislature and had incorporated in that particular part of the law a definition of the word "filthy" so that thereafter if goods were exposed to flies, dust, dirt, animals or other contaminating conditions, the law passed held them to be adulterated.

It is some such effective relief that the states need generally, and I, therefore, again renew my suggestion made at the outset of this paper, that a commission of the more experienced members of this Association be appointed to take this matter in hand and report a uniform measure for the passage of which the Commissioners can ask their Legislatures.

Mr. Geo. L. Flanders: Mr. President, may I ask Mr. Wallis one question? You spoke in your address of a rule or regulation made and enforced and then said that they brought evidence to show a violation of the law. Did you mean the law or the rule or the regulation?

Mr. Jas. H. Wallis: I meant regulation.

Mr. Geo. L. Flanders: It would be quite a difference.

President Barney: Gentlemen, we have with us this afternoon to further discuss this matter, Mr. W. G. Sherer. You will remember him as the "bat the rat" man at Portland.

BUSINESS MAN A CREATOR.

BY W. G. SHERER, CHICAGO.

Mr. Chairman, Ladies and Gentlemen:

To be the originator of an idea is an interesting thing. If the idea benefits humanity besides furnishing a livelihood it brings zest and relish to the day's work. Twenty-three years ago another man's blunder gave us the idea which has developed into the Clean Food Grocery Counter of 1916. What was originally an attempt on our part to concentrate a man's stock near his scale for reasons of economy in handling goods, and giving opportunity for display has grown into a system of sanitary protection for all dry bulk groceries with compact storage resulting in various economies and perfect display and this resulting in increased sales as secondary matters. No instance has been brought to our attention where rats or mice have gnawed their way into Sherer counters. The only instances where such a thing was asserted was disproved when we offered the dealer a new counter without cost if his statement proved to be correct. What happened was that he left a drawer open, let the rat go in and it gnawed its way out.

Cats do not curl up and sleep in goods stored as we store them. Perfect protection against dogs is provided. The overlapping edges of the close fitting drawers excludes the flying filth of the streets. The farmer whose last previous act was to hitch his reeking horses no longer selects the fattest prune from the box on the counter, nor does he run his hand through the crackers in the barrel. Dirty hands may come into the store, but they no longer contaminate your goods, because while the owners of the hands may see the attractive samples they can not sample the goods. Your imagination will convey to you full particulars of what happens to exposed bulk goods when the dust raised by the daily sweeping settled. With such mat-

ters as the excessive evaporation from exposed goods, and the unnecessary traveling about the store to fill orders for bulk goods, the grocer is concerned but you are not. Picture to your minds the inconsistency and short sightedness of the retail grocer who provides a money drawer with a bell on it, or a cash register or a fire and burglar proof safe to take care of his cash money, and at the same time scatters his money in the form of goods about his store, to be so deteriorated by dust, dirt, flies, mice, rats, cats, dogs and dirty human hands that their value decreases and the saleable quantity of the goods is appreciably diminished.

The banker has taught him to protect his money, the Food Control authorities are beginning to instruct him as to the necessity of protecting his goods, and while we are not by any means in the banker's class, as regards money influence, nor in the Food Commissioner's class as regards authority, we may without too much self praise claim to be in a position to show the dealer how to do some things which you gentlemen are telling him he must find a way to do.

Take the matter of material for use in making the counter drawers. Our experiments have led us to approve of an odorless wood rather than metal and particularly galvanized iron. The presence of zinc in the coating suggests to you at once the possibility at least of a danger to food supplies containing acids, such, for example, as apricots. But a practical difficulty has shown itself from the fact that metal scoops or tongs are used to remove the goods from the drawers, resulting in the coating being chipped off, leaving the iron base exposed, whereupon rust immediately develops. This is not a theory, but an actual result of our experiments. Briefly enumerated the sanitary features of the Sherer Counter are as follows:

1. Overlapping drawer ends, excluding street dust.
2. Solid partitions between drawers makes each drawer like a compartment in a safety deposit vault.
3. Top protection to displays excludes dust.
4. Wooden drawers instead of metal, the strictly sanitary method of storage.
5. Overlap on displays shuts out dust.
6. Flush base no dirt can get underneath.
- * 7. Rats and mice can't get in.
8. No dogs and cats can injure goods.
9. Goods seen but not subject to handling.

We furnish our salesmen with copies of your Clean Food laws and the regulations which you have established for their enforcement. We make use of several most pointed expressions found in circular 2164 issued by the Department of Agriculture. We inform our salesmen of what has been said in print by the Food Commissioner and leave it to our men to make the best possible use of a paragraph like this:

"When the grocerymen in a town find that a large portion of the housekeepers are buying only from the cleanest stores, there arises a wholesome form of competition. A food inspector can, even under the best conditions, inspect a store but a few times during the year because of the number he has to visit. The customers come every day, however, and when they act as unofficial sanitary inspectors, the merchant with the unclean store can not escape detection and punishment in loss of trade."

In this city of Detroit there is one man who has 118 grocery stores and in those stores are to be found 160 sanitary, clean food grocery counters. In the beginning it was necessary to convince him of the sanitary features of this article, but having educated him in this matter we find that others are following the leader, with the result that several hundred grocers in this city using our counters would grade high in the matter of protection of goods. We believe in education and practice what we teach. We conduct what is in reality a great business university. Our salesmen are the professors. They give personal instruction to several classes a day, each class consisting of the proprietors and such clerks or customers as they may draw into the class room. When the period of instruction is over, if the class room is a dirty store, you may well believe that the grocer has been told of it with emphasis and no fear of making a vote for the opposition party. The merchant is shown the accumulations in his stationary bins under his counter and in dark corners and he is shown the damaged, deteriorated goods and is told in plain words just what caused it. The course of instruction may be thirty minutes or eight hours, but if he is attentive, responsive and receptive he may get his diploma in the form of a counter at the end of this one term of instruction. Or it may take a visit and reprimand from your department and then a chance visit from our salesman will result in the desired clean-up. Co-operation has been one of your themes in this convention. We have co-operated with some Commissioners. We offer our co-operation to all on the same themes. Ohio has four times made use of our counters in illustrating at its State Fair a sanitary grocery. In Indiana, Illinois, South Dakota, Virginia and Arizona we have co-operated once. In Louisiana a model of our counter aids in instructing the grocers in sanitary methods. We are glad to help in this way and we do not make ourselves offensively prominent in the doing of it. Permit me to quote some expressions in closing used by delegates on the floor of this convention. No words of mine can hit off this situation so aptly as this phrase of Dr. Alsberg:

"Immensely valuable sanitary inspection work." That phrase is the double refined quintessence of circular 2164. It is pages in a paragraph. And this from Commissioner W. B. Barney of Iowa:

"The best way to bring the keeper of a dirty store to time is to trade with the man who keeps a sanitary store."

The only request that we have to make of you executives is that when you think you need the sort of co-operation which you know we are able to furnish that you make known your wants.

President Barney: Gentlemen, I would like to have a little more discussion on this paper, but we are short of time and I want to make an announcement and then we will call on Dr. Tolman for his paper. The announcement is to the effect that we desire all those having resolutions to present them as soon as Dr. Tolman is through with his paper, or so many

of them as can or very early in the morning. Now, this is the report of the Committee on "Swells and Springers in Canned Goods," by L. M. Tolman, Chief of the Central Division of the Food and Drug Department.

REPORT OF COMMITTEE ON SWELLS AND SPRINGERS.

BY DR. L. M. TOLMAN, CHIEF CENTRAL DIVISION FEDERAL FOOD AND DRUG DEPARTMENT.

As a result of the President's address at the last meeting and recommendations made by him, a committee was appointed to report to the Association on the following resolution:

"It is recommended that this Association request the co-operation of the National Canners' Association to determine the cause of springers and swells in canned goods, to determine the extent to which swells are being utilized in the production of other food products, and whether or not the use of swells should be permitted under any conditions."

This resolution contains three questions: (1) the cause of swells and springers, (2) the extent of their use, (3) should any of them be used for food. In order to answer any of these questions it is obvious that first we must know what kinds of food products are included under the term of swells and springers. Practically all classes of spoiled canned goods are included, spoiled from numerous causes, as leaky cans, incomplete sterilization, use of bad material, poor tin, action of the food on the tin, bad methods of manufacture, damage from fire or water, and many other causes.

To answer the first question, as to the determination of the cause of springers and swells, the committee, after consideration of the kinds of food products that are included under the title of swells and springers and the various causes of this spoilage, reached the conclusion that it would be useless for it to attempt to make any investigation of a character which would go into a study of the causes. It seems that it will only be through long years of experiment and study on the part of the manufacturer and chemist connected with the canned goods industry that the various causes of this deterioration will be determined and worked out, so that it was thought to be more important for the committee to take up the other questions raised in the resolution.

Before taking up the question as to the extent of the use of swells and springers, it seems advisable to take up the third question—should any of them be used for food? In order to answer this question, we must first classify the kinds of goods which are covered by this classification of swells and springers, and the committee has, in a rough way, classified these goods under six different heads:

1. The plainly developed swells due to decomposition of the food.
2. Incipient swells where a slight decomposition has taken place, and the bulging of the cans is not marked.
3. What are known as "flat sours," which are decomposed due to an acid fermentation without the production of noticeable amounts of gas.
4. The product which might be called a gas swell springer, due to the development of gas resulting from the action of the acidity of the product itself upon the metal of the container.
5. A type of swelled can which might be called a springer, but which is due entirely to overfilling the can when originally packed, or to incomplete exhaust at that time.
6. Can damaged goods. By this is meant cans the contents of which are sound but the outside has become rusty or the labels have become dirty or unsightly in appearance.

Can any of these various classes be used for food? In answer to this question it seems to be the universal opinion of food officials, and of the consumer, that swelled can goods are not fit for food purposes. There does not seem to be any doubt on the part of anybody whose opinion could be obtained that canned goods which have become swells through bacterial action should not be used for food. Whether or not all such products are injurious to health, of course, may be subject to doubt, but in our opinion they should all be excluded because of their inherent danger and the impossibility of making a determination of whether or not the bacterial action which has taken place has produced a harmful or harmless decomposition.

Regarding the use of those types of swells which are due to overfilling or improper exhaust, and to these causes alone, there seems to be no question but that they are edible and suitable for food.

As regards the third type of swells, due to the acid action of the food in the can upon the container, it seems to the committee that before such products should be pronounced as edible and used for food further investigation should be made. And certainly before such products should be permitted to be used it should be determined that the formation of gas and the swelling produced is not due to bacterial decomposition. This we do not believe is practical under ordinary circumstances.

As regards the class of products known as "flat sours," there does not seem to be any doubt but that they should not be considered as suitable for food.

Regarding the can-damaged goods, of which the outside of the can is the only part that is damaged, there is no need for discussion.

Therefore, it seemed to the committee that the first thing to provide would be a scheme for a differentiating the good from the bad so that a separation could be made. This matter was taken up with Dr. Bigelow of the National Canners' Laboratory and a scheme prepared which would guide the inspector in separating swells due to decomposition, from swells due to acid reaction or swells due to overfilling or insufficient exhaust.

The committee after considering the matter carefully decided that this matter ought to be further studied and would suggest that it be taken up with the National Canners' Association or a committee of that association, and a detailed scheme for the distinguishing of the various kinds of spoiled canned goods be presented to this Association next year.

Mr. Bigelow, in a communication to the committee, calls attention to the fact that swells due to decomposition are very rare among canned fruits, except in the case of leaky ones, but in almost every instance swelled cans containing fruit are caused by the acid reaction of the fruit upon the container, and the gas present is hydrogen.

He also called the committee's attention to the fact that swelled can goods due to decomposition are very often sterile, so that in order to tell that decomposition has taken place it is necessary to make a microscopical examination for bacteria.

In this connection, however, the fact should be noted that there are certain classes of foods put up in cans which are prepared by fermentative processes, where there will normally be present large numbers of bacteria; for instance, sauer kraut.

The third question asked of the committee was as to the extent of the use of these spoiled goods as food or in the manufacture of food products. This question presents itself in two fairly clear cut lines:

1. Local sale at point of origin, chiefly in the larger cities.
2. Reprocessing or sale of returned rejects.

As to the extent of this local sale, the committee has been able to collect a very considerable amount of evidence from State Food Commissioners, city boards of health and reports of Federal Inspectors, which shows that there is a large traffic in spoiled or rejected canned goods which, in our opinion, is a menace to public health and should be carefully regulated and controlled by the city and state authorities.

Regarding the extent of the reprocessing or sale of returned spoiled goods the committee has been able to collect sufficient evidence on this subject to be convinced that this is a much more important matter than has been realized in the past.

We were able to obtain during the year evidence in about twenty-five cases where spoiled can goods in large quantities were either reprocessed or sold for use in manufacturing food products, and these cases occurred in ten or fifteen different states and represented widely different products. These instances, together with the reports of experiences of food Commissioners, show that this traffic is sufficiently large that something very definite should be done to regulate it.

The committee thought it would be instructive to report in a general way what was found as to how rejected or spoiled goods got into the channels of trade and how they are used.

As to the local traffic at points of origin. It was found there were about three ways by which the peddlers, cheap restaurants and other users obtained their supply.

1. Directly from the grocer.
2. Indirectly from the grocer through the agency of men employed to carry them to the dump.
3. Through the collection from the dump of goods which had not been properly destroyed.

The facts obtained very strongly impress the committee that much better care should be employed by food officials, grocery men, and the trade in general in seeing that condemned goods are actually destroyed or denatured so that they could not be used for human food, as no inconsiderable proportion of the supply of spoiled goods comes through the collection of condemned goods not properly handled.

As to the use of these goods. We find that they are either peddled around to the poor grocery stores or to the cheap restaurants or boarding houses.

As to the distribution and use of the returned spoiled goods, which again go into trade, the table shows that to a large extent these go into the manufacture of other food products.

The foregoing more or less answers the three propositions made by the resolution, namely, as to the cause of swells and springers, the extent of their use and should any of them be used for food.

The committee, however, after reviewing the evidence collected, feels that this is such an important matter from the standpoint of the protection of the consumer, that this Association should take some definite action and have some uniform plan for its regulation and control, and presents the following for consideration and discussion:

1. As to the local distribution.

This must be met by the city and state inspection service, giving more attention to the work, and the need of giving this matter more attention is, in our opinion, absolutely necessary.

2. As to the return of spoiled canned goods to the jobber or manufacturer. The committee, in order to consider this matter intelligently, felt that it should know more about the extent of this traffic, and through the kind assistance of the National Wholesale Grocers' Association was able to obtain what we believe is a reliable estimate. Five hundred replies were received from wholesale grocers all over the country to the following questions:

1. Approximately what percentage of swells and springers were found in your canned goods during the calendar year 1915?
2. What percentage of said swells and springers were returned to the packers?

These replies show that less than two per cent of the entire output resulted in claims for damaged goods. Fifty-five per cent of the five hundred firms returned their rejected claim goods. Of this fifty-five per cent some returned all of their damaged goods and others only a portion. As nearly as we could estimate from the replies approximately fifty-one per cent of the firms returned fifty per cent or a less amount.

These estimates were all based upon the traffic from the wholesale grocer to the packer. From these estimates it would appear that only about twenty-five per cent of the rejected canned goods were actually returned to the canner; or, in other words, seventy-five per cent of the goods upon which claims were made was released to the retail or the wholesale grocer, as the case may be, after the claims were adjusted. It is this released stock which becomes a source of supply for the local trade, such as peddlers and cheap grocery stores.

In order that the Association may have all of the facts before it in considering this question, the committee has prepared the following summary of the reasons why the packers require any of these spoiled goods to be returned:

1. The manufacturer desires to identify the goods and allow only such claims as are correct, and also to prevent more than one claim for the same lot of goods.
2. He desires to ascertain the age of the stock and prevent claims for goods which are held over the guarantee period.

3. He desires to see that retailers do not receive credit for goods and then be in the position to release them and sell them to peddlers or reproducers or salvage dealers.

4. He desires the return of certain classes of the goods so that they can make an investigation to determine the cause of the spoilage, whether it is due to under sterilization, defective sealing, improper cans, the packing of impure material, or whatever the cause may be.

5. To look over the various returned goods and take out that portion which is sound and suitable for food.

These arguments are undoubtedly reasonable and legitimate, but the committee can not escape the fact that in their opinion all such shipments of decomposed canned foods in interstate commerce are in violation of the Federal Food and Drugs Act. How, then, can these legitimate demands of the trade be met as they should be met?

The committee does not feel that it is prepared to make more than some suggestions for discussion at this time with the recommendation that the subject be considered another year, if possible, in connection with a committee from the trade, with the object of submitting a detailed recommendation at the next meeting of this Association.

The committee would further ask for suggestions as to whether or not the state officials believe that they can supervise the destruction of such spoiled goods in such a manner as to prevent their getting into consumption, at the same time protecting the manufacturer against unjust claims that might be present by the return of the goods. It has been suggested that all claims for damaged goods might be sent to the State Food Commissioner so that he may control the disposal of the goods in question.

That certain points in the states might be designated for the collection of these goods, where claims could be adjusted, the goods salvaged, and the goods which are spoiled destroyed under supervision. Such a supervision would obviate at least in part the need for the return of spoiled goods now sought by the manufacturers.

They would not meet the necessity for having certain classes of goods returned for investigation of the cause of spoilage. This, however, the committee believes, can possibly be met by some special legislation permitting return for investigation purposes of samples or portions of shipments or the whole shipments, if it is shown to be necessary.

From the general information that we have been able to collect it would seem that there is a very strong sentiment in the food control of states and cities opposed to any plan which will permit the return or shipping of these spoiled goods in commerce, and which will not permit of immediate destruction or taking out of the channels of trade any decomposed canned goods which they may find in the course of their inspection. The evidence collected by this committee amply supports these objections, so that the committee does not believe that the food officials of this country are knowingly going to permit the shipment in intrastate or state commerce of spoiled can goods without control. Then it would seem that the only solution of the problem would be something along the line of a proper control and destruction of the goods under supervision at point of detection.

The committee has reached the following general conclusions as the result of their investigation during the past year:

1. Swelled can goods due to decomposition should not be used for human food nor in the manufacture of food.

2. Swells which are due to acid reaction of the food upon the container should not be used for food until further investigation, and certainly it should be determined whether or not any of the gas pressure found in the product is due to decomposition.

3. A very determined effort should always be made by food control officials to separate these stocks into the good and bad portions, and to distinguish between swells due to decomposition and those which may be due to overfilling or improper exhaust. However, attention should be brought to the fact that the question of overfilling is becoming very much less important, as the manufacturers are rapidly finding out just how much to put into the cans so that possibly this will not be a serious matter.

4. There is an extended traffic in swells and spoiled can goods, especially in the large cities, the source of supply of which is the rejected can goods from grocery shelves, fire or water damaged stock.

It is believed that this stock is a decided menace to the public health, and that some means should be definitely and clearly devised so that there will be uniform action against products of this kind by the city, state and Federal governments.

5. There is need of much greater care by food control officials, city, state and national, to see that condemned can goods are actually or completely destroyed or denatured, as a very large source of the supply at the present time is through the illegitimate recovery of goods which have been condemned and which it was the intention to destroy.

6. Some means should be provided by which certain classes of spoiled canned goods can be returned to the manufacturer when the question as to the cause of the spoilage is to be investigated.

7. The reprocessing of swelled can goods where the swelling is due to decomposition is not a legitimate practice and should not be permitted.

The committee presents this as a preliminary report with the recommendation that the committee be continued to make a further report at the next meeting, at that time to submit as detailed a plan as possible of the best method of handling this problem, and that the committee be authorized to co-operate with the committee from the trade in working out this plan.

Mr. R. E. Rose: I move that the report be adopted and the recommendations of the Committee be approved and the Committee be continued.

Mr. G. G. Frary: I second the motion.

President Barney: It has been moved and seconded that the report be adopted and the Committee be continued. Is there anything to be said upon the question? If not, all in favor of that motion say "Aye." Contrary, "No." The mo-

tion prevails. Now we will have the discussion first by the Commissioners.

Mr. Geo. L. Flanders: Mr. President, I want to ask just one question. Near the close of the paper Dr. Tolman said reprocessing was not a legitimate practice and it should not be allowed. I want a little light on that expression. I did not quite understand it.

Dr. L. M. Tolman: Reprocessing of swelled canned goods where the swelling is due to the composition is not a legitimate practice and should not be permitted.

Mr. Geo. L. Flanders: What I really wanted to know, Mr. President, was whether he meant that reprocessing would not restore the goods and therefore when they are reprocessed they are still to be sold under the statute. That is what you meant?

Dr. L. M. Tolman: Yes, that is what I meant.

Mr. C. Clay: I would like to ask Mr. Tolman if he thinks it would be legitimate for a manufacturer of syrups to return syrups which had a little defect in the cans when they were packed and were slightly fermented, if it would be legitimate for the manufacturers to take those syrups back and boil them up again? We have had this question come up in our state.

Dr. L. M. Tolman: I would not want to definitely answer any specific question about any particular product without giving it more consideration than I could give it at this time.

Mr. G. G. Frary: He would have to make alcohol of it.

President Barney: Would some of the trade like to say a word on this matter?

Mr. Dickinson: I would say that our laboratory has been consulted by members of this committee and as a result representatives of the wholesale grocers and of the canners have met and discussed this matter and I was delegated to come and present some points concerning it to you. I am very glad to state, however, that Dr. Tolman's report has been so complete and so fair that he has not left me very much to say regarding our standpoint. He has already mentioned the point quite fully on which we wanted these returns. There are two points which I think I might add a little to make it clearer.

One of these is, the case of faulty cans. There are frequently leaks due to fault in the manufacture of cans, and for the canner to make settlement with the can maker he must have the faulty can to show not only that there is a fault in the can but to show how many cans were faulty and to what degree. For that reason it is necessary oftentimes to have the shipment returned in order that the count may be made and settlement made with the can manufacturer.

The other point was where shipments have been made where a claim is made by the wholesale grocer and it develops on investigation frequently that the laborers in the wholesale grocer's warehouse have not been asked to be careful in sorting these swells as they might. The result is that instead of merely swells there are a good many cans which are merely a little rusty or the label shop worn, no fault of the canner whatever and for which no claim should be made to him. The bulk of the shipment may be made up of cans such as that.

Not only that but the wholesale grocer sometimes uses his own label or the packer's label and in case where his own label is on the goods sometimes the wholesale grocer does not know from which canner he purchased the goods, and it frequently happens that the wholesale grocer has made a claim on the canner for swelled goods which were not canned by that canner at all. They were under the canner's label and he was making application to the wrong canner.

Not only that. I would say that in our own practice we have had a shipment that was reported to be swelled pumpkins received in our plant, the claim was made and it was beyond what we supposed it should be. When the goods were received that shipment was of as nice canned peaches as I have ever seen. The trouble was due to the grocery man's carelessness in the way he sent them out and I remember only about one-eighth of that shipment was really our pumpkins, which should have been returned to us, and the rest was other people's goods.

Now, regarding grocers of that kind we wish to claim that privilege. It is not nearly always that the goods need to be shipped back for the reason that if the wholesaler knows that the canner is going to check up carefully on it the probability is that he would be more careful in having the sorting done, and it only needs to be used, so to speak, as a club.

I was very pleased to note the proposal of your committee for a joint committee from the trade to confer with your committee. I would say that if such is the desire of this convention I will be only too glad to appoint such a committee from the National Canners' Association to work with your committee to the best advantage of all concerned.

I want to say further, gentlemen, that I have enjoyed very much my visit here at this convention. I like the spirit of your meetings. I think it is a good thing that not only you meet together but that you welcome representative members from the trade to meet with you, so that we will get better acquainted and come to have a better appreciation of each others' difficulties. Consequently, I would say to you that the next annual convention of the National Canners' Association will be held in Cleveland, Ohio, the second week in February.

I shall see to it that invitations are sent to each one of you individually, but I want now to extend a general invitation to all of you to come and attend that convention with us. We have not only general sessions but we have sectional meetings of the packers of each individual article, as, for instance, the salmon packers, the fruit packers, or corn or pea packers or the condensed milk packers and each have their own sectional meeting. If you were interested in the technical problems of any of those lines you would get some valuable information out of the sectional meetings.

There is also a great display of canning machinery, practically all the canning machinery that is in general use will be on exhibition in motion, so that you may get a good idea of the canners' technique by observing these machines and learn more of the canners' methods.

I again want to thank the committee for the very fair presentation of the matter and bid you all a most hearty welcome to our convention next winter and to ask you to remember that the canners have only one defense to make when the wholesale grocer makes a claim against us for these swelled canned goods the amount is never large enough to pay us to send a man to go there and inspect and come back again. The only plea of defense we have is to have the privilege, at least if we deem it necessary, to have them returned, that we may actually see what his claim against us is and check his claim to us.

I would just like to ask one question, it is almost a statement. In regard to these cans that were done over, were any of those to your knowledge reprocessed or done over by the canners themselves, the man who had originally put them up?

Dr. L. M. Tolman: I do not know whether I can answer that definitely without looking up the record. We have some complete records on those, but I believe some of them were.

Mr. Dickenson: I am surprised. If you find that was the case I will not hesitate to say, gentlemen, on the part of the National Canners' Association, that we would not countenance anything of the kind and that in the event it is found that that practice has obtained by the canner who put up the goods and to whom the goods have been returned, the National Canners' Association would not only give its moral support but its active co-operation in the prosecution of such canners.

Dr. W. D. Bigelow: There is just one point that I would like to ask regarding what Mr. Dickinson has said, and that is in regard to the method of inspection of these foods which are returned as swelled goods. One suggestion quoted by the committee was that the goods be collected in some central station, as I understand it, where they might be inspected. That seems at first thought to be a very logical method, and one that would be more complete and probably more economical than the present plan. Have I quoted your suggestion, Mr. Tolman?

Dr. L. M. Tolman: That is the suggestion quoted by us.

Dr. W. D. Bigelow: As we get older we learn better than to say things which we have not tried cannot be done. Our first tendency is to think that if a thing is unusual it is impossible. But there are some difficulties to which I would like to call your attention and which I can explain best by saying something about our method of examining the products. Very frequently our laboratory gets a sample consisting of a case of two dozen cans of a product from the canner who wants to know what is the matter, why they were spoiled. Very often one dozen of the cans are swelled and the other dozen, taken from the same bags, are not swelled.

Sometimes one or two of these swelled burst on their way to us and the contents flow all over these cans. If you are familiar with the can of peas or corn that has swelled and burst you know something of the odor that comes into the laboratory. The other cans may have been decomposed and may not. They are just the ones that you don't want to be reprocessed and taken and made available to the consumer. To determine whether they are spoiled or not requires a rather nice sense of taste and smell, and you cannot examine them at all in a room where those cans are that have burst. The outside of a can has such an odor that you cannot either smell or taste the contents because the material has run over. Furthermore, the hands of the man who has picked it up are in such a condition that it would be impossible to make an examination. You have to wash that can off very thoroughly and take it to another room and sometimes you may have to wash your hands in permanganate or something of that kind.

Now, that is possible in the laboratory when we have nothing else of that kind come in. But suppose we have a store room in Michigan to which all the swells in Michigan are shipped. Can any one work in that atmosphere? I do not think the best taster of food in the United States can do it. That requires a rather nice sense of taste to tell just when food should be used. The man who can do it, who has the ability to do that, will not be able to do that kind of work all the time.

In any well managed cannery there may be two or three men who could be depended upon for that purpose. They may be the superintendent and a few of the leading men, it is incidental to their work, it helps fit them for other work, but they do not do that kind of work all the time. I question whether men could be employed to do that.

In addition to this, they need to know all the technique of a canner. They need to know when the seam is right, when the side seam is right, when there is a defect in the can, and all of the technique of the canners in all the lines of goods. A pea canner may know very little about the problems of the fruit canner, and neither the pea canner nor the fruit canner is likely to know the problems of the man who cans shrimps or sardines.

I merely throw these out as some of the obstacles which would be met with in trying to have the cans examined and passed upon by any one but the packer. I have not questioned but what committees representing this association, working together, will work out some method to which every one will agree to handle this question and safeguard the public and protect the interests of the manufacturer. I thank you, gentlemen, for your attention.

President Barney: Is there any one here who would like to say a word?

Mr. Geo. J. Weigle: I would like to ask Dr. Tolman if in your investigation you have found that washing of the cans has made a difference in the swells? In our investigation in Wisconsin we found the factory sterilized their cans and their swells reduced from two per cent to one-half per cent. I just wanted information to clear that up.

Dr. L. M. Tolman: Mr. Weigle, I do not know a thing about it. You had better ask Dr. Bigelow or Mr. Dickinson—they may know something about it. It is too big a proposition for me.

Mr. Dickinson: I can answer that. The proportion of swells varies quite largely with different kinds of fruits. With some fruits the proportion of swells is much larger than on vegetables. Individually, I represent a firm that cans vegetables only and our claim of swells run only about one-twelfth of one per cent. I would say we wash all our cans and have for years, but when we first went into business it was not the custom to wash the cans and it was some years before it was called to our attention, and we have never noticed any difference in the number of swells before or after that.

President Barney: Is there any one who desires to answer that question?

Dr. W. E. Bigelow: Mr. President, I would like to answer one of the questions that happens to be canvassed by the Committee, because it is a thing we have been talking about almost twenty-four hours a day for three weeks. We have been suggesting a great many methods on a great many matters as the representatives of the jobbers, and the matter is so complex that I think it would have to be worked out by a committee.

President Barney: I desire to call your attention to what we have left for the program tomorrow. Miss Helen Louise Johnson's paper we will have tomorrow forenoon and Mr. John Newman's report of the Egg Committee and Dr. Oscar Dowling's report on the Feasibility of a Uniform Law. Now I cannot see the necessity of changing the time of meeting of the different sessions, so they will go according to the program. I want again to call your attention to the fact that it is necessary to bring these resolutions in to the meeting and have them presented here. I know that Mr. Flanders, the Chairman, wants to get to work as early as possible, and it will be necessary to have them in without delay; well, certainly as early anyway as tomorrow forenoon. I do not know but that a resolution might be presented a little later than that, but any of you that have been on the Resolutions Committee know that there is quite a lot of work and we want to give the Committee an opportunity to get them shaped up. If there is no objection we will now stand adjourned until tomorrow morning at nine-thirty, and that does not mean ten o'clock.

SEVENTH SESSION.

THURSDAY, AUGUST 10, 1916, 10:00 A. M.

President Barney: Now, ladies and gentlemen, if the meeting will please be in order we will start our morning's program. I think it is wise at this time to give an opportunity to those that have resolutions to present them for the consideration of the Resolutions Committee to put them in, and I am offering that opportunity.

Secretary Newman: Mr. President, the following resolution has been handed in:

Whereas, Certain Federal and state laws require that food products shall be pure and wholesome, to the end that no harm shall come to the consumer; and,

Whereas, Certain foods are commonly stored and displayed in and sold from bulk containers, such as boxes, barrels, bags and other similar containers and may easily be so contaminated by flies and dust and by such animals as dogs, cats, rats and mice, and by promiscuous handling as to be unfit for human food; it is hereby

Resolved, That the protection of bulk dry groceries wherever offered for sale, demands and should receive from Food and Drug officials the same strict and vigorous attention which has resulted in the present high standard of purity in manufactured goods; and be it further

Resolved, That all proper efforts of the members of this Association should be used to secure the passage of adequate laws for the protection of foodstuffs and sufficient appropriations for the enforcement of existing laws, to the end that the dirty, unhealthy, unsanitary, fly and rat-infested grocery, or other markets where food products are sold, shall be compelled to clean up and afford adequate and reasonable protection to their goods

President Barney: Does the gentleman offering this resolution desire to take the five minutes to explain it?

Mr. Heber C. Smith: I think not, Mr. President; I think it is self-explanatory.

President Barney: Are there any other resolutions this morning? The gentleman from the Postum Cereal plant wishes to make an announcement.

Mr. Fred D. Ernst: Mr. President and gentlemen: I represent the Postum Cereal Company and I brought an invitation here to the members of the Association to visit the Postum Cereal food factory, the largest factory of its kind

in the world, as our guests. I have learned this morning that a number of the members of the Association have expressed a desire to come, and we are going to plan to meet tomorrow morning at 8:25, on the 8:25 train. It is a very comfortable train and it will get you to Battle Creek at 11:19. You can easily be taken to our plant and after a moment's refreshment and rest you will be served with a luncheon there and then I will take you through the pure food factory. I will personally conduct you all through and show you every nook and corner in our factory. You will enjoy the sanitation that has been carried out in our plant, and you will enjoy the methods of producing our foods under the cleanest and most modern conditions that can be brought about in a factory.

I am sure you people especially, of all people that have ever been entertained at our plant, will be interested, and it is paying us quite a compliment, I will say the greatest compliment ever paid our company, if you will come, as many of you as can come, and be our guests tomorrow.

You can leave in the evening at 7:17 and go back to Detroit, or at 9:20, or you can leave at 4:47 in the afternoon going west, those who have to go through to Chicago. Those who can stay over the dinner hour we would be very glad to have you as our guests at our beautiful Post Tavern in the evening at dinner. I assure you you will enjoy the day and I shall make a special effort to have something doing of a very interesting nature all day long. We would be very glad to have the ladies who are here with their husbands come also.

Mr. Soule has been doing a little active work this morning to find out just who can accept the invitation and I have some eighteen or twenty on my list at the present time. Some of those who have not seen Mr. Soule will please do so before luncheon this noon, so that I can make my reservation on the Pullman for all of you, so that we can be comfortable and know just who want to go through to the west and who want to come back. I think it is very nice of you to want to come and I assure you we will do our part if you do come. (Applause.) The Postum Company is willing to stand your expense to Battle Creek and return to Detroit; all those who want to go we will stand your expense to Battle Creek and then you can go west, wherever your destination may be. It is no kindness whatever, it is just a matter of taking up some of your valuable time after you have had a hard week, and I think it would be quite restful even at that.

Secretary Newman: I think it is only fair to say to those people that are interested in sanitation of food, and particularly where the health of the employees is taken into consideration, that I have visited this plant and the other food specialty factories in Battle Creek and they are immensely interesting and I think quite instructive to you; any of you that can see your way clear to come over, whether you pay your own expenses or not, I think you will put in your time to great advantage to yourself and to your work.

President Barney: Next we will have the report of the Committee on "The Feasibility of a Uniform Law to Enact a Requirement for the Physical Examination of Employees Handling Food Products," and in the absence of Dr. Oscar Dowling, Mr. Clay will officiate in his stead.

Mr. C. Clay: As our Commissioner, Dr. Dowling, was unable to be present at this convention and I find that the other two members of this Committee are not present at this time, I will present the report of the Committee:

REPORT OF COMMITTEE ON FEASIBILITY OF A UNIFORM LAW TO ENACT A REQUIREMENT FOR PHYSICAL EXAMINATION OF EMPLOYEES HANDLING FOOD PRODUCTS.

DR. OSCAR DOWLING.

There are three phases to the protection of food products. First, that they shall be handled in sanitary surroundings; second, that methods should be cleanly; and, third, that the persons that come in contact with it shall be free from contagious diseases. With this in mind, and in the absence of explicit directions from other members of the committee, a tentative draft of an act is submitted which can be used as a basis for discussion.

That includes the definition of the three terms, Food, Person, Establishment, the requirements in regard to building, fixtures, etc., protection of the food and food materials from contamination, and the prohibition of persons working in food establishments who have infectious diseases. It provides also that the State Board of Health shall have power to make an examination of all employees engaged in food establishments together with penalty.

The terms of the act were entirely feasible. Getting the measure into effect would depend largely on the regulations already in force in the various states. It could be controlled by the State Board of Health through local boards where there is effective local organization. In states where experiments have

been made in the examination of persons employed in food manufacture and the handling of food, there has been little or no opposition. Both the proprietors of these establishments and the public commended this measure which insures health protection.

Respectfully submitted,

(Signed) OSCAR DOWLING, Chairman.

Subject to Approval Committee.

To Association of American Dairy, Food and Drug Officials, Detroit, Mich.

Courtesy Mr. C. L. Clay, Acting Analyst, Louisiana State Board of Health.

August 3, 1916.

PROPOSED UNIFORM LAW.

AN ACT

Providing for clean, sanitary food establishments, sanitary maintenance of same and healthfulness of employes therein.

Section 1. Definitions. "Food" as used in this Act shall include all articles for food, drink, or condiment by man, and all substances and ingredients used in the preparation thereof. "Person" as used herein shall include partnership, association, company, and corporation, as well as the individual.

"Establishment" as used herein shall include all buildings or part thereof used, occupied, or maintained for the purpose of manufacturing, preparing, packing, canning, bottling, keeping, storing, handling, serving or distributing, in any manner, food for sale.

Section 2. Every establishment subject to the provisions of this Act should be constructed, maintained, and operated with strict regard for the health of the employes and for the purity and the wholesomeness of the food therein produced, kept, stored, handled, served, or distributed.

(a) The building used in the production, keeping, storing, handling, serving, or distributing of the food or of the materials used in the food, shall be properly constructed for this purpose. There shall be adequate light, ventilation, drainage, plumbing, etc. There shall be adequate toilets and lavatories, properly constructed and kept in sanitary condition. The immediate premises shall be kept clean and sanitary.

(b) Fixtures, furnishings, the machinery, apparatus, implements, utensils, receptacles, vehicles, etc., shall be adequate, suitable, and kept clean and sanitary.

Section 3. The food and materials used in the manufacturing, preparation, etc., of the food shall be protected from contamination which may render them unwholesome or unfit for human consumption.

Section 4. The habits, clothing, and conduct of employes shall be conducive to cleanly handling of all food manufactured, prepared, etc.

Section 5. It shall be unlawful for any employer to require, permit, or suffer any person affected with any contagious, infectious or other disease, to work in any establishment where food is manufactured, prepared, or handled.

Section 6. The State Board of Health shall have power to require any person proposing to work, or working, in an establishment where food is manufactured, prepared, or sold, to undergo a physical examination, said examination to be made at the time and pursuant to the conditions defined by the State Board of Health.

Section 7. The State Board of Health, through its duly authorized officers, inspectors, agents, or other assistants, shall be permitted, at all reasonable times, to inspect any establishment, or part thereof, subject to the provisions of this Act, together with its operation.

Section 8. If, as a result of an inspection provided for in Section 7, it shall appear that any establishment is being maintained or operated in violation of any of the provisions of this Act, the State Board of Health shall cause written notice thereof to be served upon the person violating said provisions, together with an order commanding an abatement of such violation and a compliance with this Act within a reasonable period of time stated in the order. Any person upon whom such a notice and order is served shall be given an opportunity to be heard and to show cause why such order should be dropped or amended, under such rules and regulations as may be duly prescribed.

If, as a result of such hearing, it shall appear that the provisions of this Act have not been violated, then the State Board of Health shall immediately drop said order, without prejudice. If, however, after such hearing it shall still appear that the said provisions have been in any manner violated, and upon a failure to comply with said order, in its original or amended form, within the reasonable time therein stated, then the State Board of Health shall, at once, certify the facts to the proper prosecuting attorney.

Section 9. That it shall be the duty of each prosecuting attorney to whom the State Board of Health shall report a violation of any of the provisions of this Act to cause appropriate proceedings to be commenced and prosecuted in the proper courts, without delay, for the enforcement of the penalties herein provided.

Section 10. That the State Board of Health shall make uniform and necessary rules and regulations for carrying out the provisions of this Act.

Section 11. That any person who shall violate any of the provisions of this Act shall be guilty of a misdemeanor, and, upon conviction, for the first offense, shall be punished by a fine of not exceeding — dollars, and, upon conviction, for the second and each subsequent offense, shall be punished by a fine of not exceeding — dollars.

Section 12. Date of Effect. This Act shall go into full force and effect on and after —.

Section 13. Repeal. That all Acts and parts of Acts in conflict with this Act are hereby repealed.

President Barney: Now we will have the discussion on this paper by the Commissioners. Aren't there some of the gentlemen in the room that would like to say a word? Is there any one connected with the trade that would like to say a word on this paper?

Mr. H. L. Harris: Mr. Chairman, in the city of New York the restaurant keepers have their food covered and

many of the restaurant people have gone to a great expense to have glass cases made with a cover that will raise up and lower down. These are installed in the restaurants where you help yourself, where you raise up the front of the case and pick out your food.

Now, there is not one man in fifty that will put the case down, close it after he takes out his food, so that it is open to dirt nine-tenths of the time, so what value is it to have it covered up?

Secretary Newman: Is not the first man, at least, protected until somebody opens it and leaves it open—is not the first man that goes in protected?

Mr. H. L. Harris: If it is not the first man it might be the second man.

Secretary Newman: I would like to say that in Chicago we are trying to get a cover, that is the particular point under discussion. We find the cafeteria is the hardest problem we have to handle. The cafeteria is in response to a public demand for a quick and economical eating place and we have not required that the food be so covered that you have to lift a lid or a front piece. We knew that if they were to have it tightly covered that there would be an additional cost for help to serve you and there would be a delay, both of which are directly opposite to the idea of the cafeteria, and no law is any stronger than public opinion behind it.

But we have secured from the cafeteria proprietors—we called them all in and first suggested the rail that you notice in front of most counters. The rail has been adopted as a place on which to rest the tray and slide along, but it was put in to keep the public back just that far from the food.

They have also a glass shelf that comes out over the goods and you stand behind the rail and reach across for the piece of pie or whatever they have on the front row, and then have little steam cabinets and things of that kind. About half the food is served you and the other half you reach out and help yourself. We would be very glad to get any suggestions that would give us further protection, and at the same time not interfere with the idea of the cafeteria.

Mr. H. L. Harris: I would suggest that the portion of the cases raised should be weighted so it will close automatically.

Miss Helen Louise Johnson: Mr. President, I wonder if the Commissioners have seen the cafeteria of Miss Stevenson in Boston, which does away with service entirely and yet covers the foods, which are in boxes that look like post office boxes. They are, of course, heated and chilled, and the goods are in there, the salads in some and the other cold things and you go and punch your button and you take out the things that you want from these closed cases and it does away with all service excepting that service for the coffee and the tea. It looks like a post office. It acts very much like the post office, with the boxes, and still the food is entirely covered.

Mr. H. L. Harris: But it is open in the rear.

Miss Helen Louise Johnson: No, it is closed in the rear.

President Barney: If the Chairman is permitted to say a word, we handle matters of the show cases this way in Iowa: After having found the show case open once we give a warning, and the next time we find it open we prosecute, and we have been able to make successful prosecutions of parties leaving their stuff exposed in this way. Now, is there any one else that would like to say a word? If not, we will pass on to the next paper by Miss Helen Louise Johnson. I suppose you all know of her activities but no one knows as much of her as Dr. Crumbine of Kansas, and I have asked him to please say a word in the way of introduction. Dr. Crumbine, if you will, just take the chair, please.

Dr. S. J. Crumbine: Mr. President, Ladies and Gentlemen: At the Battle of Chickamauga the genius who presided over the destiny of the northern army was a man small in stature, located in that Little Round Top with the frowning hills and mountains about him, but in his quiet, masterful way leading the northern armies to victory.

In a little, more or less obscure town in the state of New York has resided for the past two years the genius who has presided over the Home Economic Department of the General Federation of Women's Clubs. That little woman is essentially an optimist. She has steadfastly refused to be buffeted around by the winds of hysteria or the pure food propaganda who portray in horrid pictures the terrible conditions to which the consuming public in this country were subjected.

In other words, she, perhaps, might be best designated as having a safe and sound thought which has permeated the General Federation. It has been my good fortune to have had the opportunity of hearing Miss Johnson and working

with her during the past two years, and I consider it a great privilege that the convention is honored by her presence, to have her inspiring word and to lead the way toward a real co-operation with the women's clubs of this country.

I can say nothing further than perhaps to say this, that, while Miss Johnson is a small woman, yet, mentally and culturally, she weighs a ton.

Ladies and gentlemen, I have the pleasure of introducing to you Miss Helen Louise Johnson, Chairman of the Home Economics Committee of the General Federation.

FOOD CONTROL AND PURE FOOD PROPAGANDISTS.

BY MISS HELEN LOUISE JOHNSON, WATERTOWN, N. Y.

Mr. Chairman, Ladies and Gentlemen: I very greatly desire that you should fully realize my sincere appreciation of the privilege and honor you have given me by asking me to speak on this program and I wish to begin by thanking you for it in order that I may go farther and say in relation to some things discussed yesterday that this is obvious proof of your desire to secure and give co-operation and that whatever yesterday's discussion disclosed to you, it showed me there was an almost universal wish and effort to win and secure and use the women's interest, willingness and co-operation. I am not going to say that you are any more anxious for this than they, but you are successfully putting forth more energy in trying to get it.

Every time I go to a convention where I am to speak I wonder why I ever get my paper ready beforehand for these reasons: First, each and every previous speaker seems to be thinking along the same lines and steals my thunder. If I say what I intended I may seem to be merely echoing them. Second, they all present so many points which I want to discuss, emphasize and make use of in the things I have planned to say. These meetings have been so full of this sort of thing that I am embarrassed by all I want to say about those things which have a bearing upon my subject.

There are certain definite points which have been established in my mind during the past two days. I state them to clear the way for those which I am to make. First, you have constantly emphasized your belief that while the protection of the consumers is your business, how to protect them is your problem. Second, you have stated in many different ways what Mr. Frary summed up by saying that sanitation is now the most important phase of food control work.

Third, Prof. McCollum merely established in one of the best, most constructive, plain talks on the subject of nutrition I have ever heard that those who know all there is to know about it know so little actually that they can only give the one safe home economics reply to these questions, viz: "It depends." At the very close of his talk you will remember he said, "After all you can only determine some things with a certainty where every factor is known, for it is a question of hygienic conditions." What is that but saying, "It depends."

These points granted, those I wish to present seem as definitely indefinite, for they are, first, that the only ultimate way of protecting consumers is by educating them to protect themselves.

Second, that the more easily understood but less easily attacked matter of clean food must be substituted for the long continued agitation of pure food.

Third, that the greatest harm is done, the greatest barrier to rapid progress along both these lines is built and many of the difficulties you and others have to meet are created by the self-constituted, ignorant, half-educated, pseudo-scientific food authorities. Your problem and mine have met here on a common ground.

What methods can we devise, what ways can we discover or find which are sufficiently dignified and uncondescending to commend them to our sense of the properties to be observed, by which we may meet, undo, overcome or combat the work and the influence of the food propagandist?

To answer this we must first analyze the situation. I give it as I see it and I want and earnestly request you to discuss it as you would if one of your own masculine members presented it. The greatest compliment you can pay me is to treat me as one of yourselves.

I give a suggestion to you first. A little over two years ago at the request of Secretary Houston the president of the General Federation of Women's Clubs appointed a special committee of four whose business it was to make a study of certain activities going on in Washington and elsewhere and report back to the Federation what the Government was doing of particular interest, or in behalf, let us say, of the housewife.

You are as familiar as I with that oft repeated, unintelligent statement that the Agricultural Department does everything for pigs and nothing for babies. It may not make you so cross as it does me. But the prevailing idea is that the Department of Agriculture is there primarily to boost the farming business and that this has nothing to do with any one but farmers.

That was not, however, the last drop which crystallized the solution. The well known food faddist, to whom Prof. McCollum referred yesterday morning, not by name but by his extreme interest in poor, starving America, was unknown to himself the one to give this service. He had printed one of his remarkable intimate interviews, which bear the closest resemblance to a fancy dress party. We are there, we cannot deny it, but so disguised our nearest and dearest cannot recognize us. He had quoted an interview with Secretary Houston.

I am referring to this not alone to say that this committee was fortunately and happily able to establish mutually beneficial relations between several departments of the Government and the General Federation and to act as the means of interpretation of many things as well as a medium of communication.

But to state the next step. The Home Economics Department quickly realized that the situation was this: Here were conservatively speaking a million or more women seeking

knowledge on many subjects and truly desirous of obtaining it. Most clubs like most food commissioners have no money to do things with. They have to get material and speakers and collect the facts as best they can, and they did not know where to go to get the facts.

I know how absurd that sounds. I know how you would say to me, "But, Miss Johnson, we offered to do so and so," and you have, and I know it. All here know the enormous amount of work going on in the Agriculture College, the Experiment Stations, and so on, but I repeat that the average club woman does not know what knowledge is available or how to get it.

Education consists in knowing where to find things. You and I may know that a foundation work in the study of cancer is being carried on in the Plant Pathology Division of the Bureau of Plant Industry, but when cancer is discussed where the average person hears or reads it, is he told this? It is not so queer after all.

The General Federation of Women's Clubs is nearly as old as the Department of Agriculture. What do you know of its organization, its divisions, its policies, its regulations, its methods, its work, and its personnel? Again and again it has been a most important factor in influencing legislation. Do you know how it does it? And suppose you want to use it, how would you go about it—would you know how to get the facts you were seeking?

We know that many of the producers do not know, for at least there has been one group of them who have been so easily hoodwinked by a woman as the women have been influenced and misled by the food philanthropists.

Wanting information and not knowing where to get it naturally afforded the opportunity to such schemes as this current copy of the American Food Journal has exposed.

Years ago, when I was giving demonstration lectures, I had a colored chef who used to assist me. He was a real character and he certainly did have traits which we call instincts in lower animals. He used to say to me, "Miss Helen, don't you have nothing to do with that man?" "Well, why not, Alex?" "He ain't honest." "How do you know?" "Well, I just naturally know, Miss Helen, he don't smell honest."

There were some of these higher than the Government authorities who just naturally didn't seem honest to some of us, and we kept close track of them, watching their manipulations of the Women's Clubs. But we realized why they were accepted and sought and believed and followed. It's a wonderfully convincing thing to see a baby's stocking dyed with the candy a baby never does eat, and one forgets that strawberry juice would turn the stocking even a prettier color.

The man who is really working out a scientific contribution seems to be too busy to make a side show of himself, even for a perfectly good pure food show from the show man's point of view. To meet this and some other things we coined a slogan and tried to induce each state to take it, and do it.

We said, "Study Oregon, study Florida, study New York, study Michigan," that is, when, as is the custom, the clubs turned to the chairman of the department for advice and suggestions in the club's year's study and program and we replied, "Study your own state." We asked them, "What are its food laws? How do they differ from the adjoining states or from the Federal law, and why? Who enforces them?" and so on, and so on.

Now, I give this to you as a suggestion possibly of a thing you can do for your help in the food sanitation work and partly because of the other suggestion I shall make later on. But when I say study, it's a poor word. I wish we could find a better. Here is your opportunity and there arise at once many, many difficulties.

We ask the women to study the laws, but this is difficult.

Legal phraseology is apt to be confusing to the lay mind. If I were a man I might have said "is confusing." Being a woman I say "apt to be" in order not to afford opportunity for the suggestion that of course the woman's mind does not grasp the technicalities which the legal wording is designed to conceal, avoid, embrace, or evade.

However, I note the following in the primary remarks of a compilation of laws affecting extracts. In each instance the information is given in a concise and simple form, and only the "gist" of the law is stated, thus making it easy to understand, all unnecessary verbiage and legal technicalities being avoided as far as possible. So at least the manufacturers of flavoring extracts, like the women, desire simplicity.

Let me state at the outset that I stand in proper awe of all those persons, men or women, who are able to promote business in the way the legal brotherhood and our legislators, Federal and state, are able to do. It is a wonderful thing to behold. To the woman's simple mind, the purpose of the pure food and drug laws being clearly defined as to preserve the public health and to prevent deceptions, the most concise, definite and clear statements such as could be understood by the huckster as well as the scientist would seem to be the most desirable.

It sometimes appears that such an ordinary clause of a food law as the following:

"Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met and it is hereby enacted by the authority of the same that it shall be unlawful for any person firm co-partnership limited partnership joint stock company or corporate body by himself herself itself or themselves or by his her its or their agents servants or employees to manufacture sell offer for sale expose for sale or have in possession with intent to sell any article of food which is adulterated or misbranded or of foods short in weight and measure within the meaning of this act" written without a single punctuation, plain as it is, gives far more opportunity for evasion or misuse than if the Commonwealth of Pennsylvania had simply reiterated "Thou shalt not steal" and "Thou shalt not bear false witness."

Most of us know that a will which reads, "I, John Doe, give \$5,000 to John Smith," is difficult to break. My woman's mind, and I am admitting it, is that, with all the limitations such an admission makes, argues that if it were possible—of course it is not, for the business of law is difficult to learn and hard to practice, and many there are who walk therein—if it were possible to say, "The State of Pennsylvania forbids any one or

ones to sell, or offer or try or intend to sell any adulterated or misbranded foods; it forbids the selling or offering for sale foods short in weight or measure," it would come far nearer accomplishing the object of the law than the statement which I breathlessly quoted. Then if all the states said the same in precisely the same words, I believe we would have found that street called Straight on which shine the lights of progress.

I also wish to frankly state my full realization of the fact that we, no, you, have elected legislators, state and federal, for the business of legislating. What a wasteful procedure it would seem to send all these men to the national and state capitals every year, or in some fortunate states once in two years, and then try to keep them from promoting some thirty to forty thousand or more bills, many of which are great improvements upon the ten commandments, for they enable his, her, its or their agents to interpret "Thou shalt not steal" and "Thou shalt not bear false witness" in at least forty-eight different ways.

Not being the household managers in your own homes, I realize that the annual or semi-annual house cleaning orgies which were formerly the mark of a good housekeeper probably brought horror to your souls. They were so displacing to one's comfort, and after one of these peace disturbing times it was so difficult to find undoubtedly worn out, but greatly cherished belongings. You probably have never experienced that sense of tranquility only to be secured by the clearing away of an accumulation of useless, or maybe even useful but unnecessary things cluttering attics, store rooms, closets, and even the living apartments.

If for a few moments you could imagine that state of feminine bliss, perhaps you would appreciate why some of us mere women have felt that if there could be a general house cleaning of legislation throughout this United States, our home, as represented by our country, would be thereby greatly improved. Have you never wondered what would happen if we left the President and his cabinet, the state governors and their office forces to do their business undisturbed for a period of time? What would occur if the country decided to see how all the laws promulgated during the last administration worked out when enforced, before introducing changes or new ones?

But that is a mad fancy, quite as extravagant as anything in that classic on the law which appears under the title of Alice in Wonderland:

"You are old, said the youth, and your jaws are too weak

For anything tougher than suet,

Yet you finished the goose, with the bones and the beak,

Pray, how did you manage to do it?

In my youth, said his father, I took to the law,

And argued each case with my wife.

And the muscular strength which it gave to my jaw

Has lasted the rest of my life."

Again and again, as I have dizzily watched the frantic endeavors of those earnestly striving to keep up with the law so as to keep within it, I have seen the picture of Alice breathlessly running with the Red Queen. "And still the queen cried, 'Faster! Faster!' and dragged her along. 'Are we nearly there?' Alice managed to pant. 'Nearly there, why we passed it ten minutes ago. Faster!' Then they stopped and Alice found she was right where they had started. 'In our country,' said she, 'you'd generally get somewhere else if you ran very fast for a long time as we've been doing.' 'A slow sort of a country,' said the Queen. 'Now here you see it takes all the running you can do to keep in the same place.'"

Speaking seriously, although I confess to seriously feeling all I have said, I noted that the article in the issue of June 10 of the Journal of Commerce devoted to the question, "Has the Federal Food Law Fulfilled Expectations?" asked no woman to reply. It depends upon the information the Journal desired as to whether this was an important omission or a minor one. I have no need to say to this convention that far more women than men are intelligently and actively engaged in the buying and use of foods and drugs. If the Journal wished to know if the producers felt that their business had been more promoted and protected during these ten years under the Federal Food and Drug Law than before, the questions were probably asked of the right people. If they wished the other side of it, the public's side, it would have been wise to include some of those users of food products.

The facts which seem to stand out most prominently are these: During this administration a sort of a cleaning house process has actually been going on in the Department of Agriculture. I wish to take this opportunity to give my personal testimony as to the kind of a man our present Secretary of Agriculture seems to me to be. In the history of the Department we have had no better administrator, no one who has formulated better policies nor promoted the interests of all the people to the same extent.

From an unformed, somewhat vague, dimly defined executive branch of Government activity the Department has emerged into the most important factor in our city's progress. At first it was most difficult to determine where the particular duties of the Department began, and where they ended. One could only surmise. The bill creating the Department of Agriculture offered opulent opportunities for paternalism of a pronounced order.

Little by little the confines of the Department were set, while its duties grew. After the agitation previous to the passing of the Pure Food and Drug Act of 1906 it is natural that the public should have viewed the Department in the light of a police court, with Dr. Riley as sheriff, and many continue to do so, only at present they cannot visualize the chief policeman. This is probably the greatest achievement of the present administration.

I suppose many of you have children and possibly have questioned the wisdom of sending your own or your neighbor's little ones to kindergarten. Were the kindergarten all its adverse critics claim it to be, earnest thought on one thing alone should establish its worth. Before the child enters it, authority to him is concrete. He has never experienced the law, the force of public opinion, the punishment which comes from social ostracism, that painful experience of not being acceptable to a jury of your peers. Law and order have meant to him a command of mother or father; breaking it brought a definite

punishment easily forgotten and many times promised but not given.

When a child enters the kindergarten circle—and those of you who have kindergartens realize I mean an actual hand to hand circle—he has entered a world similar to that in which he will take an active part later on. He offends, and the others of the circle put him out. Law has become abstract, a public opinion, and unconsciously the child imbibes a knowledge of a force which will more or less influence and guide his entire life.

To a degree it seems to me that Secretary Houston's administration of the Department of Agriculture has created a similar impression. Instead of the sheriff with a force of police all on the hunt for innocent or guilty offenders, we have a great constructive division of the Government apparently striving to build up instead of break down business, to educate and lead into right and intelligent doing for the benefit of both sides of the circle.

One of the greatest absurdities promoted and advertised by those of whom I am later to speak is their fostering of the mistaken idea that the producer and the consumer are naturally antagonistic, and that any business can be successfully conducted on a basis of mutual suspicion and criticism.

We have gone far since the days when each man necessarily looked upon the other as an enemy until he proved himself a friend. We are actually reaching a place where the idea of the law may in time prevail, that a man may be deemed innocent until proved guilty, instead of having expensively to prove his innocence in the face of unwarrantable, pernicious



MISS HELEN LOUISE JOHNSON.

and preposterous attack on the part of the food propagandist.

More and more are we finding that we must let the people into the game and educate them to play their parts in it. In matters of common concern, from the Mexican border to the baking powder factory we have discovered that we need to counsel together in order to secure a mutual comprehension.

You know far better than I the great benefits resulting from the establishment of machinery for actual co-operation within the Bureau of Chemistry in place of verbal discussions of such policies. Possibly I know as well as you the great value of the Office for Information now existing in the Department of Agriculture.

All these things are in the line of progress. They are a real part of that awakening of civic consciousness about which historians will write when they come to tell the story of the years beginning with the insurance investigation, in which one of our presidential candidates gained national fame.

Whatever exist, and much does, of shame and of meanness, of trickery and fraud, of vice and immorality, there is not a thinking man here who, upon looking back, would not agree that in spite of the passion and the greed of war which mar the present time, that there has grown within us a new shame and anger for oppression and meanness, a new faith in the essential goodness and brotherhood of man and a new hope for better and even better things. The acceptance of this should mean inspiration, a desire to bring about the realization of that which but a few years since would have seemed an impossible dream.

The greatest mistakes arise from ignorance. The opportunity of the fakir, the false advertiser, the pseudo-scientific food propagandist and all others of his tribe lies, first, in the ignorance of the consumer, and, second, in the lack of positive,

definite, actual co-operation between the states as well as between producer and consumer.

The greatest need of the home today, whether this be construed as the single unit, the community, the state, our country, or the great round world, is actual co-operation, that sharing as an equal, the playing of the game together. Those who are seeking to exploit the public rely on Barnum's belief that there is a fool born every minute. But it is not true that the public likes to be gulled, and there is a growing distaste to this form of amusement.

You have a Committee on False Advertising, a very present evil but one which many are endeavoring to meet and constructively combat. That committee has presented recommendations of principles which, in their belief, should be enacted into law, confining itself, perhaps necessarily, to advertisements. The Association of Advertising Clubs has started its campaign along the same lines, and the Supreme Court of the United States has already rendered at least two very important decisions which affect this work.

But there has been little or no decisive, constructive action toward controlling the newspaper agitator and the magazine propagandist, whose work seems to the speaker at least the most far reaching and insidiously harmful influence food control officials have to combat.

It is one thing, of course, to define unfair competition, and quite another to define unfair methods. Those are yet to be catalogued and described, and the legal problems involved are intricate and complex. But most men know the rules of the game, and the man who indulges in unfair dealing is apt in time to be punished by the kindergarten circle method. In this particular direction, however, delay has proved dangerous, because the food propagandist, masquerading in the guise of philanthropist and friend, in mutually educating and influencing a very large public, is being afforded the opportunity and paid for taking advantage of it.

His indictments of foods on grounds which, to say the least, are highly debatable, are eagerly read and unfortunately often believed by those who have had no chance to hear the other side, and no basis of actual knowledge to lead them to question statements which bear out the semblance of truth.

As I sat here yesterday listening to Prof. McCollum talking about unknown A's and H's, but referring again and again to butter fats, I could fancy the lurid tale our friend could have written about oleo had he only heard the professor, unless the vitamins of his story were tested in the neutral solution of the packers' advertisements.

But here we are confronted with these things, the question of diet, so complex a proposition no honest scientific worker dare say more than that under these controlled conditions such and such things happened to rats. But should I ask Prof. McCollum, "Did you grow to five feet nine because you probably had enough of unknown A's and I stop at five feet because perhaps my diet was deficient in unknown B's," don't we all know just about what he would reply if he did not run for cover before the question could be put?

Yet remember the woman tackling her woman's job of feeding a mixed family of adults and children of varying ages, kinds and shapes on a given sum, usually without any previous experience, education or training for it, supposed to know how to keep house, bring up children, expend the family's income, cook the meals and a dozen other more or less important economic or scientific things just because she was born feminine, is seeking that help which answers that definite question, Can I feed my husband beans three times a day?

I want to digress right here to give you a deserved tribute. Talk about chivalry and trust! I know nothing to equal man's blind faith in woman's ability to do these untried things successfully except her wonderful holding of his faith by accomplishing the tasks. Yet I always wonder one thing: Why do men willingly and unquestioningly entrust their most precious digestive apparatus to the woman, but deny her the vote?

The man who acknowledges that his entire education along these lines comes from some books he read, and another whose scientific statements I am about to quote are the only kinds of authorities who would dare to answer "yes" or "no" without modifying explanatory clauses which easily create bewilderment.

The problem of the food supply in this year of 1916 is vastly more complex than it was in 1816. The change in food production, necessary preservation and conservation, brought about not alone by growth of cities and shrinking agricultural areas but by transportation facilities and changed industrial and social conditions are of immense and crucial moment.

Suppose war did come to us in our present condition. Germany nor France are not waging this war in the trenches alone. Germany's efficiency is not one of mere machines. It is found in German households and kitchens and that is going to be the ultimate test in every country and with every nation. The truest patriotism consists in teaching the people how to use and conserve the nation's resources instead of to waste and misuse them.

Yesterday Prof. McCollum spoke of the fallacy of the whole wheat doctrines as promoted by the food prophets and said, "This is the second time I have ever said this in public," and I want to know why all of you don't see that and realize that your silence, your failure to openly and frankly state the fallacy of such doctrines and teachings leaves the few of us who have continually reiterated "These faddists do not know, they are only stating half truths," without support. Have you not appreciated how far reaching and subtle their pernicious educational work has been?

The other evening I questioned Dr. Bigelow in a way I could easily create the wrong impression, for no one should for a moment question any statement of food preservation that prevents waste and thereby controls cost. The whole proposition of the food propagandist, as I have followed it, ignores the common people, the thousands and thousands who cannot buy creamery butter at 40 cents a pound but who above all else need safe, therefore clean, cheap food worth in nutrition all they pay for it. Renovated butter is like storage eggs, a positive blessing when sold properly.

If these men and women who spend their days stirring instead of building up things, would expend half this energy in improving culinary methods and plans for securing greater food

supplies, what a blessing they would be. It is painful to view so much misdirected energy and it makes some of us as nervous as hearing a dog howling at the moon.

I do not need to enlarge upon this phase of the situation. I am here today to impress upon you the effect of this agitation upon the consumers as I know and see it, and then, if I may, to offer suggestions for combating this, for these misleaders of public opinion cannot longer be ignored, or their influence derided. I am quite sure that many, if not most of you, have felt it beneath your dignity and that of your positions to pay any attention to such ridiculous, preposterous, and in many cases stupid criticisms, statements and attacks.

That a person who has written and given out such statements as the following could be accepted as a reliable and impartial guide in foods which can be purchased with safety and confidence seems unbelievable to the men and women versed in science. I am quoting from a well known pure food book which bears an inscription reading "The Food Pilot," and says of itself, "Its value as a safe guide to the housewife and health of the home is immeasurable."

"There are four great classes of foods: proteins, carbohydrates, hydro-carbons, and minerals."

"Any albuminous substance, such as eggs or meat, is classed as a protein food."

"All fats and oils are hydro-carbons."

"Water and the salts of compounds of potassium, sodium, calcium, iron, magnesium, manganese and silicon, naturally occurring, are classed as mineral foods."

Later this illuminating volume, the supposed author of which has opportunity for coming in contact with thousands of women actually eager for assistance and education in giving to their families the right foods, while you can only reach hundreds, if you do that, states as follows:

"There is no real reason why the housewife should buy drugged or denatured food. First of all the compilers of any pure food list must believe in and adhere rigidly to some high standard. The standards of our Federal Government are good as far as they go, but they do not go far enough. They do prohibit in foods the use of wood alcohol, boric acid, copper salts, formaldehyde, and a few other substances, but permit the use of sulfurous acid, peroxide of hydrogen, alum, coal tar dyes, benzoate of sodium, salicylic acid, methyl salicylate and various others. Pure food should contain no elementary substances not normally present in the human body nor any combination of elementary substances not readily assimilated."

"The standard established, the foods listed must conform strictly thereto. Thus a pure food list in a large degree reflects the belief and conscience of the compiler."

Second, such a list is helpful to the consumer, since it constitutes a buying guide, conserving the interests of both purse and health.

"Third, it is of advantage to the manufacturer, since it places his products of quality above and beyond dishonest and unfair competition. A housewife who purchases by some reliable guide is not tempted by the low price of clandestine foods. A product clearly reflects the character of its maker." And finally, "The Pure Food List is educational and progressive."

There is no need of quoting further. I do so because I wish to impress upon you that while you look over that book just as I view the discovery columns of a woman's magazine, the average housekeeper believes it and accepts it as truth.

It is just as funny for you to read, "Many flours are demineralized. Natural wheat contains about 1.70 per cent of mineral water, or the vital elements indispensable to life and health. Practically all of these elements are removed by the modern process of making high patent flour," as it is to me to read that a woman has discovered a method of keeping the bathtub clean by making a frame of lath and cheesecloth which fits over the top.

But these statements are far from being humorous to the ordinary consumer. Nor should we regard them in this light, for the attack upon federal, state and well known city food officials is not alone insidious, but constant and in some cases open. The newspaper which heads the list of those devoting themselves to the destruction of public confidence you are familiar with. Many believe that its food expert takes himself seriously. The circulation of the paper is fortunately largely local. Its effect is not. The following seems a positive burlesque, but people, scores and scores of people, believe it. I quote from the issue of Saturday, July 8. It is headed, "Wilson and Congress Stirred by Food Facts," and says:

"The army food supply, involving the possible repetition of the murderous assault of 1890 upon the health of the United States soldiers, promises to excite Congress more than any other issue now before the Senate or the House."

"For three days I have been in Washington in constant conference with President Wilson, Secretary of War Baker, Senator Chamberlain (Democrat), chairman of the Committee on Military Affairs; Senator Weeks (Republican), member of the same committee; Representative Murray Hulbert (Democrat), Representative Walter M. Chandler (Republican), and a score of other United States officials."

"In the committee rooms, corridors, and offices the food question is constantly discussed. So keen and persistent have been the activities of Hulbert, Chandler, and Chamberlain in arousing the interest of their colleagues in this stirring subject that yesterday an amendment to the army appropriation bill was introduced in the Senate, followed immediately by the appearance of the same bill in the House."

"Republicans and Democrats, forgetful of all partisan issues, have united as one body in their unselfish effort to insure for the boys of 1916 a wholesome, adequate, and suitable commissary equipment and supply. 'By our zeal now we can in some measure atone for the tragic neglect which made the Spanish American war such a hideous series of outrages against our own soldiers,' said Hulbert last night as he and Chandler finished an inspection with me of the camps at Radio. 'Yes,' commented Chandler, 'but we still have to contend with that group of conservative officials who are quite satisfied that all is well just as it stands and who refuse to be disturbed by criticism, however timely, just or significant.'"

"These two remarks, flashing against each other out there on the sun baked clay where Batteries A and B of the First Field Artillery and the First Regiment of Infantry of the Dis-

trict of Columbia are mobilizing under the shadows of Washington monument, epitomize the entire situation.

"The worst conditions of Abanito, Chickamauga Park, Havana, Santiago, and Tampa were hinted at in the commissary tents and kitchens which we had just finished examining.

"No devility was actually in evidence in the form of grossly polluted foodstuffs, but such food as was present was pitifully meager and wholly inadequate. The canned corn cow trimmings suggested the most alarming charges of Major-General Nelson A. Miles, of Major Jesse M. Lee, of three hundred and six regimental and company officers of the regular army in Cuba and Porto Rico and of four hundred and forty-one witnesses whose sworn testimony revealed the horrors which the unpunished greed of the packers visited upon the innocent and helpless troops who were poisoned by canned refuse unfit to feed to dogs, but good enough for human beings sent to war.

"Following is the record of what we found:"

And it follows. If you have not had an opportunity to read this inspired article, you should hear it in full. It is unique. There is a statement which reminds me forcibly of the tramp's recommendation of soap: "Since using one cake of Jones' soap, I have purchased no other." The writer of this article describes his visit with the President, then states, "We had been in his office scarcely ten minutes when he asked us to go to the Secretary of War at once."

The last paragraph but one reads:

"In the meantime the years of research which have been devoted to this long neglected issue by patient, disinterested and unselfish students seem about to bear fruit." The fruit is dated July 7, and is No. H. R. 16851 and reads:

(Read bill introduced by Mr. Hulbert for the appointment of a commission to supervise the food supplied to the military forces of the United States.)

The incredible thing is that a reputable Congressman representing some portion of some state could be induced to introduce such a bill. But there it is, and the readers of the newspaper which devoted columns of space to implications of fraud, trickery and deceit on the part of every one who does not agree with its food expert, or uphold him in one way or another, are impressed with an idea which he could deny he ever intended to convey or imply.

History has proven that where countries and people begin to view each other with suspicion, to prepare for imaginary enemies and seek ulterior motives for common place acts, causes for hostility of different kinds follow in abundant sequence. To sow the seeds of rivalry, to foment discontent, to create suspicion is not the way safety or even good sound business is to be sought or found. Desirable publicity is not the point. Discussion of matters of public concern can be productive of the utmost good, but the insidious undermining of confidence has never been found to promote honest dealing or build up business, private or public. Knockers do not kill men, they kill business. They are the ones who shift sand in the gear boxes of progress, and for the newspapers and magazines which in the name of progress incite suspicion, abet unfair competition, and foster wrong beliefs there should be punishment like that given in any other deceitful misrepresentation or perfidious dealing.

It is perfectly clear that unfair competition is a species of fraud. It should be as clear that unfair methods belong in the same category. We have been more or less apathetic toward this particular form of misrepresentation for several reasons. One, because it has seemed too absurd to discuss; another, because we have felt that such methods were ineffective, and anyway we had no way of combating them.

In the July number of the American Food Journal there is a detailed account of the recent hearing on commercial glucose. Being interested, I diligently scanned the available newspapers and magazines, those which are apt to reach the housekeepers, in order to see if any report of these proceedings would be given. So far as I have been able to discover none has, and the chances are none will be, unless the champions of sugar write further articles on the champion adulterant.

This is the point I desire to present. How many women see the American Food Journal, compared to those who see the popular woman's magazines? How many women would read through such a detailed account as that published in the Journal, even if they are told that the facts sustained and established at that hearing are valuable and important to them? Is it not the duty of such organizations as this not merely to establish the facts, to tell the truth, and insist that others should tell it, but to formulate some plan, some method by which such truths and established facts may reach the minds of the consuming, much misled and really abused public?

That we know is not enough. That we use all the means at our command to get the news to the women consumers is not sufficient. There must be new and better ways found, for so long as we do not demand and constructively use the newspaper and magazine column for the truth, which can be made as popular if not as spectacular as their opposites, the pseudo scientist, the faker, the seeker for mere commercial gain, the one who treats these matters as a hyena howling over and delighting in filth, will continue to be read and believed.

Why should he not be? An apparently reputable paper, one with a large circulation, day after day publishes statements and accusations which apparently go unchallenged. Do the readers of that paper know anything about the suits for libel, the forced retraction of bold faced statements, and the laugh of derision which goes up from those who regard the colossal egotism of the writer of those malignant fairy tales as the evidence of an unbalanced brain? Certainly not.

The turmoil of life is apt to induce a spiritual fatigue. We are tired of it all, and we can not legislate men into being honest. The newspaper and the magazine may not be telling the truth about that particular instance, but goodness knows, there is enough bad they could talk about. Why magnify these trifles? After all, people and tribes have lived through far worse things.

Yes, all that is true. But have you accepted your position for the sake of the salary or the service you may do? The salary is necessary. It ought to be commensurate with the labor involved. Yet you and I know that when we work merely for pay we have lost zest in the game. We have gone stale, and the vision of results, of the goal, have disappeared. It is

one thing to forget a fact or intention; it is quite another to forget the importance of it.

I wish to refresh your memories with the importance of devising some method, some way of meeting the injustice done your own business by what I consider unfair methods of competition. There is, as I see it, but one way, and that is by creating opportunities to mold public opinion.

The long, slow process of education we are all at work upon. Men and women are slowly learning those fundamental facts upon which not only the science of nutrition but proper sanitary inspection are based. But you and I know that adequate food control and health work is hampered everywhere by a lack of funds, which practically nullifies the laws, because without this they can not be enforced.

Is it not your part to clear the air and to bring about some common counsel by which all men may understand each other? Some of you know that one of my day dreams has been the bringing together of groups of food producers and food consumers, with the food control officials, in order that all sides might discuss and confer over their mutual problem, which is but the safeguarding of our food supplies. This means more than mere legislation or even the enforcement of already enacted laws. It means that our economic interests must be conserved. It is our positive duty to make those whose demands if secured would make prices soar to prohibitive heights, realize that all can not buy fresh eggs, creamery butter or pure cream of tartar. They must learn to count the cost.

It is not alone your duty, but it is the privilege of all those giving service, whether it be in the State Capitol, or Experiment Station, or in the Civic Club to raise and protect the standards of common interest and common justice. But it can not be done without common understanding. I am not even sure it can be done without a willingness to sacrifice your own personal dignity, and come out in the open and fight.

The old and oft repeated saying that if you give a calf enough rope it will hang itself, is familiar to all. But sometimes the calf is valuable and it is dangerous to have a long rope. It seems to me that the progress of food work in this country at the present time is too valuable a thing to be wound up in the rope by which we trust the calf will eventually strangle. I believe that an honest acceptance that the food propagandists now rife in the land represent a danger which should be openly met, would at once lead to opportunities for counteracting their influence.

The women's clubs are actively desirous of co-operating with the right people, of being helpful in the right ways, but they can not be unless you not alone call upon them but instruct them in the things they should do. I am not betraying confidences when I acknowledge that in many places the women know far too little of the administrative methods and difficulties of the laws and ordinances, and how they might daily help in their enforcement. But that is their misfortune, not their fault. Certainly the legal enactments, Federal or State, controlling foods and drugs, have in general not been given them in an easily understood, or inspiring, readable form.

I earnestly believe that this organization could assist the food control work of this country in no better way than by publishing either a joint bulletin or digest of work, or whatever you wish to call it, which would give to the men and women a clear statement of what is going on in matters which so closely affect their health and economic interests. I wish it might be a magazine. I am very fond of fairy tales, and I have dreamed one of a magazine actually jointly published by the producers, the consumers as represented by the club women and the State and Federal Food Departments. Don't ask me to give the details. I can only state that I know there is a positive demand all over this country from women for a magazine of a different character from the so-called women's magazine of the day, which yet gives to the college bred, scientifically educated woman news in primer style, as if she could only read in words of one syllable.

Women are frankly weary of it; not all women. Every day and every year there are girls and women and boys and men of all ages and with varying desires and intellects, but there is a very large and rapidly increasing body of intelligent, educated women who are actively and seriously working in all kinds of civic and economic problems; these want to know the facts, not technically, but practically, honestly stated, and no one is meeting this need.

I have brought with me, although I know most of you are familiar with them, copies of the Bulletin published by the Women's Municipal League of Boston, and the Civic Club of Philadelphia, as samples of what many women are doing and reading.

Mr. Nathan Williams of Washington, in his Digest of the Federal Trade Commission law, states:

"Fundamentally, unfair competition is proven by dishonest advertising." I think I am right in stating that a man who advertises his personally established standard of so-called pure foods as higher than the government is thereby at least participating in unfair competition. I believe I am right in claiming that a man who gives the following as a proper chemical experiment for a lesson in chemistry is not a fit judge of food standards.

This is the first experiment in an Elementary Chemistry supposedly given to the students in a normal school. Students in normal schools are usually graduates of high schools where they may or may not have had chemistry. The first experiment in this book reads as follows:

"A very satisfactory remedy for tonsillitis is a mixture consisting of equal parts of sulphur and powdered sugar. This is a recognized specific, and at one time was sold as a patent medicine at fifty cents per ounce. The instructor should prepare a quantity of the specific, varying the proportions slightly. Pass the mixture several times through a fine sieve.

"Qualitative work. Place a spoonful of the powder in a beaker. Add 50 cc. of water, boil and filter. Test both filtrate and residue in any way you choose. Of what is the powder composed? How do you know?

"Copy and sign the following statement:

"I hereby certify that a mixture called Tonsillitis Specific and examined by me contains.....

"Name....."

"Date....."

I believe I could be upheld in my opinion that unfair competition is found as much in indirection, innuendo and negatively stated claims as in the positive statement, and that it may be considered a meaner form, because not so capable of direct answer.

If, therefore, it be your duty and privilege to safeguard the people of your state by preserving public health and preventing deception, is it not as much so to safeguard them from the deceptions of the propagandist whose influence is economically unfair? In the twelve forms of unfair competition which have been definitely stated, I note No. 9 includes both black lists and white lists. Are we then not justified in stating frankly but definitely that we can countenance no such thing?

I have said enough. I have not said all I feel concerning the machinations and work of the food and home economics propagandist. I have met him and her in silent battle for four years while I have been endeavoring to keep the Home Economics Department of the General Federation from illegitimate commercial exploitation.

Some of you have been of immeasurable assistance in this. I want you to do more, for while no longer chairman of this important department of the clubs, I believe I can speak for the women of the country in asking you to plan so that we may counsel together to combat a very present evil and build a lasting good.

President Barney: Miss Johnson would be very glad to answer any questions that any one has to ask.

Mr. Geo. L. Flanders: Before asking any questions or commenting on the paper I think it is due Miss Johnson, and I therefore offer a resolution, that we extend a vote of thanks for both her able and courageous address.

Motion seconded.

President Barney: Won't you make it a rising vote of thanks?

Mr. Geo. L. Flanders: Yes, I will.

President Barney: It has been moved and seconded that we give Miss Johnson a rising vote of thanks for her most able paper.

Mr. Geo. L. Flanders: Most able and courageous paper.

President Barney: All in favor please signify by rising.

(The motion was carried by a rising vote of the convention.)

Dr. S. J. Crumbine: Mr. President, Miss Johnson made a very important suggestion, it seems to me, and I have been thinking how that suggestion might be put into form. It has occurred to me that this Association might, with great profit, invite to our next annual meeting, and other meetings hereafter, the Committee of the General Federation and like committees of each of the State Federations, the Home Economic Department Committees and the Public Health Committees of each of the states and the General Federation, and if a little work was done in the proper manner, I suspect that there is a considerable proportion of those women who would very gladly avail themselves of the opportunity of meeting with us annually.

I think it is a good opportunity that we may get in actual working co-operation. I would make that, not as a motion, perhaps, but as a suggestion for the Committee to take up.

Miss Helen Louise Johnson: They have asked me if I have any suggestions as to what Dr. Crumbine said. He was right, it seems to me, and I am sure if she is given a very definite invitation, instead of an indefinite one, she would like to come. Of course, when you meet in a large city like Detroit, the club women are to a very large degree outside the city at this time of the year. They have gone to their summer homes and they do not particularly notice the newspapers, but if in planning wherever you are going you send out your programs and send out your invitations, it would be perfectly possible for you to get them to the people directly, to these people who would be interested, those committees, and I am sure that nothing you could do to help the women would be greater. They do want to know and hear about the work that is going on, I think they would welcome it.

Mr. Newman has asked me about this man you are all interested to see, the producer, whether he ought to be there. I think he ought to be there all the time. He knows all of these things and he is not the evil minded person that you think he is. A few of them may be, but in general the producers are trying to produce the goods that we can't get along without. We can not do without those things, there is no question about it, those things that would deplete our food supply.

Now I said to a young reporter who was in this room somewhere this morning that I think the last utterances of Dr. Mendel are fairly worth talking about. I think they estimate that in 1931, by the average increase of acreage of wheat, that we will have reached our limit of producing wheat just as it is going now. That is going to mean that bread is going to rise if it is not intensively cultivated. It means that the cost of food is going to increase all the time.

The packers are not increasing prices merely for the sake of getting more money. They want to live, but they are increasing prices because they can not get more beef. The demand for beef has risen above the supply. Now, what are we going to do about it? How are we going to conserve these things, for I want to tell you that we have to deal with it. Thousands of people throughout this country who can not increase their salaries, that thousand dollar man, that fifteen hundred dollar man, that seventeen hundred dollar man, there is just one or two propositions open to him: Either you have got to increase his salary or you have got to teach his wife to buy nutritious food so that she can feed her family adequately.

That is our educative problem, and that, it seems to me, is the awful thing that this food propaganda is doing to us, it is keeping us from educating this woman so that she can give adequate and proper nourishment for the family. That is just as much for you as the safeguarding of foods, because you are there to conserve the country's interests, to safeguard the country's food supply.

President Barney: Are there any questions, ladies and gentlemen? Are there any ladies here that would like to ask Miss Johnson any question? Are there any of the Commissioners or any of the trade? We want to include you all.

Mrs. Ida Lowell Marsh: I appreciate what Miss Johnson has said and I wish her paper could be published, or in some way printed, so that it would be before the women of the clubs that are interested in the utterances of Miss Johnson. There are some in the city that did not know that there was a general invitation for the women to come. To sum it up, everything sensible, scientific and reasonable, the safest points, the salient points can be put before the women as well as the men. I think she has her ideas just right and I say this from actual experience of years and years of home people and bringing up a family and as a woman in my sixty-third year.

There is so much said against the packer and against the canner, but the people do not realize what the yellow journals are doing. Some of our magazines do the same thing, they do not know any better.

The salient points of the address, not all of it, will that be published anywhere at all?

Miss Helen Louise Johnson: It will be published in the proceedings of the Association. The entire address will be published and the Secretary says that the women of the clubs can get the proceedings by merely asking for them, and he will be glad to have the General Federation or the state magazines or the club bulletins copy from those as they desire. But any person can get it. Right in the back of the room there stands a man who is aspiring to say something on it because he is the Editor of the American Food Journal and he is going to publish it in full.

Mrs. Ida Lowell Marsh: What I mean is, will it be printed by itself? They do not want to read all of the proceedings so that they can read that.

President Barney: Now, if there are no more questions we will take up Mr. Newman's Egg Report. You know that this Committee was continued from last year. We will now have the report of the Egg Committee, by J. B. Newman, Chairman, Assistant Food and Dairy Commissioner, Illinois.

Mr. Geo. L. Flanders: Mr. Chairman, may I ask the chair to ask the Committee on Resolutions to meet at one o'clock in the room adjoining here?

President Barney: The Committee on Resolutions will meet at one o'clock in the room adjoining.

We will now hear from Mr. Newman and then I will give an opportunity after Mr. Newman's address to bring in other resolutions if there are any. Section A and Section B will meet this afternoon, according to the program, at 3:30. Now, gentlemen, if you will please come to order we will have Mr. Newman's paper.

Secretary John B. Newman: My colleagues on this Committee are Commissioner Weigle of Wisconsin and Commissioner Frary of South Dakota, and rather than read their contributions to the report I am going to ask them to read them first, because there are peculiar conditions in their own states that they can describe incidentally.

REPORT OF SPECIAL COMMITTEE ON EGGS AND EGG PRODUCTS.

BY JOHN B. NEWMAN, ILLINOIS.

Mr. President, Ladies and Gentlemen:

It is now one year since I had the honor and pleasure of reading a report of the Egg Commission to you during our nineteenth annual convention at Berkeley. Previous to that time the Commission had done considerable work, and I assure you we have not been idle during the past twelve months.

Last fall and during the early winter there were poultry and egg conventions held in various locations and the egg question, the law of Illinois and contemplated Federal law received a great deal of attention. At that time we anticipated certain classes of eggs known as "Rejects for breaking purposes" were to be shipped in cases with identified strips.

After a couple of conferences in Chicago, attended by Dr. Alsberg and various Commissioners, Mr. Chas. E. McNeil, ex-President of the National Poultry, Butter and Egg Association and the present President of the Chicago Butter and Egg Board and other large egg dealers, the Federal Department issued its ruling as follows:

171. Interstate Shipment of Adulterated Eggs.

The Department of Agriculture has had under consideration for some time the application of the Federal Food and Drug Act to the shipment in interstate commerce of eggs in the shell, especially the two classes of eggs known in the trade as "current receipts" and "rejects" from candling rooms. "Current receipts" contain at different seasons of the year varying proportions of eggs which are filthy, decomposed or putrid. "Rejects" from candling rooms as a rule contain large portions of eggs which are filthy, decomposed or putrid, and very small proportions of eggs suitable for consumption.

Under the Food and Drug Act, eggs, in common with other articles of food, are adulterated if they consist wholly or in part of a filthy, decomposed or putrid substance. Section 2 of the act prohibits the shipment in interstate commerce of foods which are adulterated, and it is plain that this prohibition applies to the shipment in interstate commerce of "current re-

ceipts" or of "rejects" from candling rooms or of any other grade of eggs in the shell unless the filthy, decomposed or putrid eggs have been removed.

In the opinion of the Department, shipments consisting in whole or in part of eggs which contain yolks stuck to the shell, moldy eggs, black spots, mixed rots, addled eggs, black rots, and any other eggs which are filthy, decomposed or putrid are in violation of the law.

The investigations of the Department have shown that it is commercially practicable, by the method of candling, substantially to eliminate from any given shipment the eggs which are filthy, decomposed, or putrid. It is not the practice of the Department to base proceedings under the Food and Drugs Act on shipments of eggs unless there are at present larger percentages of bad eggs than are ordinarily present in recognized commercial grades of candled eggs. The Department is informed that in commercial practice cases of eggs do not receive even the lowest candled egg grades if the cases contain more than one and one-half dozen, or five per cent of bad eggs. Country shippers who are not certain of the freshness of their eggs should candle them before shipping them in interstate commerce.

Eggs which are adulterated may be shipped in interstate or foreign commerce for use in tanning or other technical ways without violating the provisions of the Food and Drugs Act only if they are first denatured so as to render them incapable of being used for food. Since it is impracticable to denature eggs in the shell, adulterated shell eggs must be broken out and denatured prior to shipment. The views of the Department with respect to the denaturing of eggs are stated in Service and Regulatory Announcements, Chemistry 7, Information 19, and in Service and Regulatory Announcements, Chemistry 12, Opinion 102.

They did not recognize "Rejects for Breaking Purposes," nor the identified strips.

In the meantime, just previous to the first of the year 1916, in Illinois, we had applications for licenses for egg breaking establishments. We had gotten up the forms, which required first, that a man shall file an application for license. Upon receipt of that application, we made a sanitary inspection of the premises, looked into the matter of equipment, etc. If it was satisfactory he was notified to send his license fee to the State Treasurer. Upon the obtaining of a receipt from him, we issued to the applicant his license and factory inspection number. Within thirty days we had four licensed egg breaking establishments. Two were held up until they could make alterations that brought the place within our sanitary law. We now have over ten in operation.

We soon found that a compliance with the other provisions of our law was going to very nearly eliminate the class of eggs that we anticipated might be shipped under the billing of "Rejects for Breaking Purposes" in the identified cases. The people were candling better in the country. The only kind of eggs practically that were left for this kind of business, other than first-class eggs that would not need any identifying strips were a class of eggs known as "leakers," and further taking into consideration the fact that the Federal Government did not recognize "Rejects for Breaking Purposes," we have seen fit not to require such labeling and, in fact, have found very little need for it. We found very few as shipments of that class of goods.

While I am speaking about this "Reject" proposition I wish to say that so far as Illinois is concerned, the greatest difficulty, the greatest problem that we have to solve has been one of properly handling and conserving wholesome "leakers." I mean by that "leakers" of wholesome stock.

In large centers like Chicago there are a great many "leakers" which are good food. It is a crime to destroy this good food and we wish to co-operate in every way to save it, but the very fact that it is a "leaker" proves that it is subject to immediate contamination. It must be given carefull and immediate attention or the good food will soon become bad food.

The large receivers have been in the habit of breaking the "leakers" into tins in the candling room and when they would have a can or two full they would send them to the storage. While they were accumulating the can or two they were continually exposed to the contamination of the ordinary egg breaking room, for within a few feet of where this can set was the ordinary receptacle in which the candler was breaking the rots. There was a great chance of infection and a careless candler would once in a while get an infected "leaker" into the can of the supposed good "leaker."

In our experience we have found that this breaking into the container is not satisfactory. It is not necessary at the present time. Possibly with a little more education in the work and a greater realization and more care by the candlers we may be able to accept this breaking into cans. We have found the best thing is to have these large receivers put the "leakers" in what are known as metal trays, gotten out, I believe, by Dr. Pennington's Laboratory of the Bureau of Chemistry. This metal tray holds three dozen "leakers" in the filler. The flat is put over the filler when it is full and another metal tray is stacked on top of this one and filled.

In Illinois we are accepting these kinds of "leakers" and permitting them to go to the breaking establishments, provided that during the warm weather they are delivered twice a day, and we have satisfactory results. These "leaker" trays must be so constructed that they are tight and easily cleansed. They must be kept clean.

There is quite a little protest to be permitted to use the open container.

I would like to hear in a discussion the experience of some of the other Commissioners regarding the handling of "leakers."

One unusual feature of this egg work is that at the same time that we are securing for the consumer better or more wholesome eggs and more of them, we are, in so doing, as we correct the conditions, showing the producer how, if he complies, he is going to increase the income from his hens. The middlemen will be benefited in that they do not have their money tied up in bad eggs.

In the past they have been paying for bad eggs, paying for cases and fillers to hold them, paying drayage, transportation and storage on them, paying insurance on them and candling again in the winter season to get out the bad eggs. There

has been a pile of money taken out of circulation to handle bad eggs. This is all released for other purposes.

We issued various bulletins regarding eggs, some of which I have with me. Altogether we distribute 600,000 egg bulletins in Illinois. The Department Editor worked overtime getting out copies for the press in the rural districts. Commissioner Matthews took it up with the wholesale grocers at their convention and asked them to have their salesmen talk to the country merchants about the proposition and warn them.

We have worked the thing through every angle. We require the first receiver, be he a huckster, a country merchant or a poultry and egg man, to candle the eggs. The farmer offers a lot of eggs and there are bad ones amongst them. The country merchant or first receiver must candle them, must give back to this farmer these bad eggs. We do not want him to handle and pay for the good ones alone and discard the bad ones, but we want Mr. Farmer to take back the bad ones from his own lot. We feel that after several experiences of this kind he will get tired of taking back bad eggs. He will begin to wonder why he has so many bad eggs and then he will begin to avail himself of the literature and data that he has received, and he will take better care of the eggs, the hens, roosters, nests, etc., and as a result have fewer bad eggs.

The farmer who offers bad eggs for sale is prosecuted. The country merchant who receives the eggs without candling is prosecuted. The same applies to the huckster. The country merchant says he is too busy, he can't stop to candle; he is prosecuted just the same. The huckster says he can't do a day's work if he candles at every place; he is prosecuted. They say that they keep each farmer's eggs separate, candle them when they get back into town and settle with the farmer on the next trip.

Now, you know how accurately they can keep track of each farmer's eggs, and you know how far you would get in prosecuting that man when you try to identify a certain lot of eggs as belonging to a certain farmer, and you know how much faith the farmer has in that man's story.

If they are candled right on his farm, however, there is no mistake, and there is no doubt it is convincing, and we must convince the farmer not only that it is his eggs that are bad, but that we intend to enforce the law.

Again, if we allow the huckster to receive eggs and take them to town and candle them at his leisure, it is unfair to the country merchant. It is putting the man who is obeying the law at a disadvantage, and that is the last thing we should stand for. So, in Illinois, in spite of many protests, the first receiver, regardless of who he is, must candle the eggs and ask the farmer to take the bad ones home with him.

Early in the spring we had a conference with the Central Division of the Federal Department to see what could be done in a co-operative way for an extensive survey. After three or four meetings Dr. Tolman assigned six inspectors from his department. We assigned twelve from our department. We grouped these eighteen men, one Federal man and two State men, in groups of six, three each, and assigned certain cities to each group, and the six groups had their allotment of cities to work in for forty-eight hours. Mr. Miner, the Chief Clerk of our department, Dr. Tolman and myself went down the state with them.

Every second evening the entire force met at a given point and we had a review of the work of the previous forty-eight hours. Rumors regarding conditions in adjoining territory were given to the men who went into that territory next, etc. These men went to new territory for forty-eight hours and the second night we met again at some given point. The reports were immediately sent into the Chicago office and violators were summoned to a hearing at some central point. At each point we gave a report to any local papers of what was doing and the names of the people who were accused of violating. We got as much publicity out of it as we could. We carried on this kind of a campaign for four weeks. Over 400 violators were given hearings and over 350 of those have been given to the attorneys for prosecution. There is some difference in the egg conditions in Illinois as a result.

Immediately following this campaign, Mr. Pierce of the Food Research Laboratory, one of Dr. Pennington's force, began an educational campaign in the state. A man went ahead and billed him, invitations were sent out from the office, literature was sent out advising people in the community of the meeting, the time and place, and the farmers and merchants came in and received instructions. Mr. Pierce is still in the state on this work. Dr. Tolman could not leave his Federal men with us as long as we would have liked, because he took up the same kind of work with adjoining states, of which I hope the Commissioners will speak before discussion on this report is ended. We feel that with this extensive and expensive campaign and with the great amount of publicity there will be no excuse for one not being informed.

We find a great many receivers of eggs trying to candle with an absolutely useless candling machine or device. We do not hesitate to tell the men that they are no good. The electric bulb in a piece of stovepipe is as good as anything. We do not recommend more than a two hole candler; the six and twenty-four and thirty-six egg hold candlers are absolutely useless. Each egg must be turned in every direction and held at all angles to be effectively candled.

I think you will be interested in hearing of the reports of some of the progressive egg receivers in our state who have been interested and have kept some track of things. We have been on top of this work for over two years now and we can give you some figures. For instance: One man at Hoyleton, Illinois, in the southern part of the state, has kept a record. Two years ago in April, May and June, he received an average of forty cases a week and his loss during the three months on a weekly receipt of forty cases was 3,500 bad eggs. This year during the same months, the same location, with an increased receipt of forty-five cases per week, he has less than 500 bad eggs, only one-seventh as many, or 3,000 more good eggs.

Four merchants would save 12,000 eggs or one thousand dozen at twenty-five cents per dozen, \$250 saved to this community, which is quite a saving in one location for three months.

Other men who have kept track tell us practically the same thing, that their loss is about one-fifth of what it was two years ago. Before another year rolls around these facts will become

recognized and better understood and the community will realize what it means to handle the eggs so as not to have this loss. The consumer of eggs will be better served and will be better pleased, and whereas the Department received a great deal of censure and an unlimited amount of kicks from the producers and dealers, it is beginning to receive encouragement from the consumer and the large progressive dealer.

I was speaking with Mr. Dittman, one of Chicago's largest dealers in eggs. Mr. Dittman said to me Monday, July 31st, that if the egg conditions had been as they were up to two years ago that we would have had during the past hot weather a loss as high as from ten to fifteen dozen bad eggs to the case, whereas during the past four weeks, during this extreme hot weather, the loss on eggs shipped to Chicago had been running in our Illinois eggs about two dozen bad to the case. This was the longest hot spell in forty-five years.

I am very sorry to say that some of the eastern receivers are not working with us. They continue to send quotations into our territory on a current receipt basis. Members of the Chicago Butter and Egg Board as a body endorsed our law, rulings and regulations. I understand that some of the eastern receivers criticized the Chicago Board for so doing. I wish to let the eastern men who offered such criticism know that we have knowledge of it, and I take this opportunity to speak in defense of the dealers who are supporting us. Mr. McNeil and the officers of the National Association did their best to get full support from the trade and did secure the endorsement of the Chicago Board. We acknowledge the support and we shall continue to acknowledge the criticisms of buyers outside of the state who continue to send in quotations for current receipts, and I hope the Commissioners of the larger eastern cities, in which states are cities receiving large amounts of eggs and operating egg boards or exchanges, will look into the practices and habits of their dealers.

I think if they could go into a dark room and candle the intentions and habits of these men they would find a large number of "spots" and "rots" of intention and habit that should be broken in the shell and denatured. There is nothing that will break down our efforts so much as this unfair competition between people who are not complying and the dealer who is complying.

Right here I wish to say that we have had at all times in this egg work complete co-operation with the Federal Department, both from Washington and from the Central District in Chicago, in charge of Dr. Tolman. When our men have found in their rounds that carload or less than carload shippers were sending their goods east and were not complying with the law, we forwarded the information to Dr. Tolman's office, and we know that they have been followed up. Dr. Tolman's force in the field with our men got on to a great many people that were shipping east and gathered much valuable information that enabled them, by following up these shipments east, to help us in our work here.

These eastern dealers that I have referred to above, that are sending out quotations for current receipts, we have, wherever we could get the quotation card, sent it to Dr. Tolman and he is following up shipments to these people on such quotations.

We feel very grateful to the Federal Government for the help that they gave us. We wish that they could have been with us longer, but we were not selfish, as we knew that the neighboring states were in need of their services as much as we were, and as they had done us much good it was only fair that our neighboring states should receive that same help. I hope that all of you Commissioners that contemplate getting into this egg game, if you are not already into it, will, before you start, take the matter up with the Federal authorities. Those who have already started and been in touch with the Federal authorities will, I believe, back me up in what I have just said.

At this point, gentlemen, I wish to say that this is rather heroic work, to go into an egg candling room, which is, as a rule, close (as they wish to have it somewhat darkened) and also poorly ventilated, and stand in there and candle out three or four cases of eggs, candle them carefully, and explain to the local candler different defects so that he may be better posted. To spend ten or twelve hours a day in rooms of this kind, the thermometer from 90 to 105 Fahr., is not the pleasantest or easiest job in the world. I wish right here to testify for the faithfulness of the men from our State Department and the Federal Department, for they sure did stick tight on this egg work.

Just before I left we had a conference with the managers of the Claim Department of the railroads and asked them if they would not insist that every man who ships eggs on their road be required when he bills them to declare that they are or are not candled eggs. The state requires the candling and the railroads can lay it in to us if they like. But see what it means to them: A man ships a lot of current receipts and puts in a claim for the eggs if anything happens, and, of course, he claims that he shipped select, closely candled stock.

Now, if the railroad was able to prove that he did not it would make some difference because there is considerable difference between the price of current receipts and extra select. Why should the railroad company allow themselves to be fooled in this manner?

The little dealer who is so anxious for eggs that he wants to send out a quotation for current receipts is no credit to the industry, and the National Association should go on record to that effect.

Now, this egg work is hard work and you have to be persistent, have to follow it up for several years, but it is worth the effort. I thank you for your attention.

Secretary Newman: Now, as to the support that we have received in the city, here is an illustration (indicating clipping) from "Watertown, Ill. Republican:"

"WARNING TO EVERY ONE WHO SELLS BAD EGGS: The egg law inspectors are becoming more strict every year. The other day they stepped into a store at Evansville, Illinois, and proceeded to candle a merchant's eggs. They arrested him for having spots, rotten and heated eggs in his possession. They picked up a basket of eggs belonging to a customer, asked her if she was going to sell them, and on her answering 'yes' they proceeded to candle them. They found bad eggs. She was also arrested. They both had to appear in court to pay a big fine. The inspector said, "For two years we have been warning you storekeepers and farmers to sell nothing but good

eggs and if you do not know the law now you must suffer, for prosecutions will follow every place we find bad eggs."

Hereafter the stores will be compelled to protect themselves. We will candle your eggs and send back all that are not first-class. The law says the producers must candle the eggs before they offer them for sale. It's unlawful to send to town eggs that are not good even though you are satisfied for us to reject the bad ones.

The law says:
EVERY EGG YOU SELL MUST BE FIT FOR HUMAN FOOD.

Here are a few simple rules if followed will keep you out of trouble:

Produce unfertile eggs.

Sell or pen up the rooster after breeding time. The hen will lay just as well.

Fertile eggs rot very quickly.

Provide plenty of clean nests.

Gather your eggs twice a day. Sell them twice a week in hot weather.

Do not wash eggs. It removes nature's coating and the eggs rot very easily.

Keep eggs in a cool, ventilated place, never in a damp or mouldy cellar.

Never sell eggs you find out in the lot or field from the nest a hen has stolen away.

When you bring eggs to town keep them covered to protect from sun or rain.

Don't pack your eggs in anything heating, such as bran, black flour, sawdust, etc. Bring them packed in clean cardboard fillers.

Egg producers, we ask you to co-operate with us for better eggs. We both will gain with it by higher prices. It is not our doings but laws made by the states and United States, and from what we hear they are very busy enforcing these laws. Waterloo-Pinkel Merc. Co., Gauen Merc. & Lumber Co., H. C. Boehne, Jung Bros., Geo. Kuhn, Joe Senf, St. Joe, Ill.; A. Eichenseer, Hecker, Ill.; F. C. Wolf, Foster Pond, Ill.; Buettner & Sons, Wartburg, Ill.; R. D. Butler, New Design, Ill.; Wm. Susewind, Burksville, Ill.

We have had a great deal of co-operation and support, the country merchant has handled this as a trading proposition and he has had his troubles. But he is dealing with the local farmer, he is depending on him for support and you can see that you have got to swing the big stick and you have got to protect him. He is with you, but he can not let you know it, that is all, and you have got to get that.

President Barney: Now, gentlemen, who would like to discuss this matter?

Mr. F. H. Fricke: Mr. Chairman, have we not two papers from the other members of the Committee?

Secretary Newman: Commissioner Weigle of Wisconsin has a paper and Commissioner Frary from South Dakota has one.

President Barney: We will hear from Commissioner Weigle.

Mr. Geo. J. Weigle: Mr. Chairman, Wisconsin has done very little work in the egg problem, we just started our work about sixty days ago. We have no specific law on this specific subject. We have a general law, but we hope to introduce an egg law similar to that of Illinois in the coming Legislature that will take care of the egg question.

EGG SITUATION IN WISCONSIN.

BY GEORGE J. WEIGLE, WISCONSIN.

Mr. Chairman and Gentlemen of the Convention: That it is the duty of each state to regulate so far as possible the production and sale of all foods can not be denied. Naturally each state takes up and works out, if it can, first, the problems in connection with the food product in which it leads. So Wisconsin has given much time and attention to the dairy industry, we think not only to the benefit of the consumers of dairy products, but to the industry itself.

Other states have directed their energies toward their great food producing industries, some having specialized in eggs. We have only recently taken up the egg problem in a systematic way, but hope from now on with the benefit of the knowledge and experience of our neighbors to be able to make rapid progress in controlling the production and sale of eggs.

Our investigations so far have extended over the most favorable part of the egg producing season and have been limited to shell eggs, but even so the importance of state control is apparent to me. We have found certain business practices which are not only dishonest competition, but which stand in the way of an effective campaign of education in the production and sale of good eggs. We have found that the farmer has not as yet put forth an earnest effort to produce eggs. He has been willing to carry on the egg and poultry business as a side issue, content to take a profit or a loss, as the case may be. We have here then, perhaps, the two most apparent causes for bad shell eggs.

Let us look first at the marketing conditions and practices I have just mentioned. We find that certain buyers and shippers make a practice of buying and selling shell eggs case count, current receipts, or no loss off. The fact that there is a market for eggs under these conditions does not tend to encourage the production of good eggs, but, on the contrary, encourages the offering for sale of anything that looks like an egg.

The farmer collects eggs less frequently, markets them less frequently, and why shouldn't he, since he receives no consideration for any effort he might have made to produce good eggs. If there is a market for rotten eggs you will always find some one willing to supply that market. I say, therefore, that the first big step to be taken is to control, if possible, the buying of rotten eggs.

I might relate here many instances to show how bad eggs get into the channels of trade, but I know you are all familiar with these facts. If it is possible by law and regulation to keep on the farm every bad egg, much will have been accomplished in improving the quality and quantity of eggs available for food. You may say, "Haven't you a law preventing the sale of rotten eggs?" Yes, we have such a law, but if the buyer of eggs is a buyer of both good eggs and bad eggs the task of keeping bad eggs out of the channels of trade is much greater.

I feel that if I am able to correct the practice of buying bad eggs in Wisconsin I will have struck a telling blow to the traffic in bad eggs. The method of delivering this blow is, perhaps, the real problem. That there is need of co-operation between states and State and Federal authorities is evident. The details of methods of food inspection is not the purpose of this paper, but rather the cause for and the correction of the bad egg evil.

Having destroyed the market for bad eggs, it will be easy to teach the farmer to produce good eggs. While the consumption of eggs is already enormous, no doubt it could be doubled if the user of eggs could at all times feel sure of not only fresh eggs but of eggs of good flavor and size.

The farmer of today—and he is our great egg producer—has, either through lack of time or knowledge of how to produce eggs, been content to carry on egg and poultry production as a side issue. He personally gives little time to this work outside of gathering the eggs. One reason for this is that the farmer does not realize the possibilities of chickens on the farm. He has never kept books and does not know at the end of the year whether there is a profit or a loss. Chickens in too few cases receive the time and attention due them. The great need of today is the establishing of egg production as a business and not as a side issue. If by working with the farmers and producers of eggs we can bring about a realization of the importance and value of the egg crop, if we may call it such, we will have taken another big step in the right direction.

After having accomplished these two things, that is, honest marketing and efficient production of eggs, we will have the necessary time and energy to spend in investigating the use of spoiled eggs in other food products.

It has not been my purpose to burden you with a lot of detailed information as to the number of cases of eggs examined and the number of bad eggs found, with a classification of the bad eggs in which rots, spots, blood rings, etc., were found, but rather to state what I believe to be the cause of bad eggs and to suggest ways and means of preventing and marketing such eggs.

No doubt more efficient work can be done if each state has a special law controlling the sale of eggs. While the purpose of this law will be the same in each case, its phraseology or form will of necessity vary with the different states.

By co-operation between the various states and Federal authorities we should be able to apprehend any bad eggs offered for sale as food which may have escaped inspection and destruction at some of the smaller egg buying centers. If the time ever comes when the magnitude of the egg business will warrant the establishing of state clearing or candling houses for eggs through which all shipments of eggs must go, we might hope to be in position to absolutely control the quality of the eggs shipped from one state to another. This would be a system of absolute state control. (Applause.)

President Barney: We will now hear from Mr. Frary.

REMARKS OF GUY G. FRARY, SOUTH DAKOTA.

Mr. President, Ladies and Gentlemen:

In order to insure the sale of good, wholesome eggs only, we believe it necessary to attack several sides of the problem, as follows:

First, to educate the producer in the production, handling and marketing of eggs. Second, to educate the merchant in the grading, storing, sale and shipment of eggs. Third, to secure from the railroads the best possible transportation facilities for handling this very perishable product. Fourth, to obtain the co-operation of commission merchants and produce men in correcting certain trade abuses which are demoralizing to the business and creative of more or less justified suspicion on the part of the retail merchants as to the integrity of the commission men in their business dealings.

For the accomplishment of these ends we recommend, first, a continuation and increase of the efforts of the Commissioners to disseminate information regarding the production, handling and marketing of eggs among farmers and others, and believe this should include the use of circulars and placards published by the Commissioners, also the placards on the Infertile Egg which may be obtained from the Bureau of Animal Industry for the asking. We have distributed thousands of the latter in our state during the past three years and aim to keep this placard posted in every grocery and general store at all times during the spring and summer. It is studied with much interest by the farmers and it is now not at all uncommon to find a farmer who knows what you mean when you mention infertile eggs. We believe also in "rooster day" and have plenty of testimony that this effort to eliminate the chief cause of fertile eggs is productive of much good. The State Experiment Stations and Agricultural Schools should also give far more assistance to the farmers along the line of poultry and egg production than has been their policy in the past.

Second, the merchant should not buy eggs which are unfit for food, that is, he should candle all eggs he buys or otherwise make certain that he is taking no foul eggs. When a merchant pays one farmer the same price for eggs containing ten per cent of rots that he pays another farmer for first-class eggs, he is doing a great injustice to the second farmer and discouraging care in production. He should use far greater care in storing eggs, he should ship them often and should insist upon better handling of the product by the railways.

Third, the railway companies should be compelled to furnish, wherever the traffic will warrant, refrigerator cars for egg shipments. I have known of instances in our state where eggs have been held in a box car for three or four days in midsummer while being transported a distance of considerably less than one hundred miles. No eggs can stand such conditions without spoiling, and this loss eventually reverts to the producers. Express shipments in South Dakota have offered some relief during the past two years as we have very low intra-state rates.

Fourth, commission merchants should, like the retail merchant who first takes the eggs from the farmer, buy only good eggs. The same principle holds here as with the retail merchant, and if the commission will take whatever comes at the same price the influence works back directly to the producer, and demoralizes the whole business. In states where the farming land is settled as sparingly as it is in Dakota and where

the towns are far apart, there is sure to be a greater or less quantity of bad eggs marketed. These must be culled out at the first opportunity and be kept culled out until the eggs reach cold storage or consumption.

Methods practiced by some buyers, where a price is quoted for the good eggs with a guarantee of so much per case, would appear to be unfair competition. This plan amounts essentially to a straight price proposition, but is misleading to the merchant selling the eggs. On the other hand, there is some complaint that commission men in candling take out a greater loss than actually exists, and there may be some foundation for such complaint, but such practices would eventually lead to the downfall of the firm following the same.

Buyers should be distributed so as to make the hauls as short as consistent with profitable operation, and plants for handling checks, cracks, dirties and heated eggs should be located near the producing regions in order to avoid loss in shipment.

Remarkable improvement is noticeable in South Dakota this year over all previous years, and in spite of the uninterrupted hot weather which prevailed in the state from June 25th to July 31st, the eggs have been marketed in much better condition than ever before.

I feel certain the chief deterioration has occurred after the eggs have reached the retail merchant. The activity of the Bureau of Chemistry in an effort to prevent interstate business in rotten eggs has been a great aid, and co-operation with the Bureau has resulted very favorably for the work in our state.

President Barney: Are there any Commissioners that would like to say a word?

Mr. H. L. Eskew: Mr. President, I have nothing to say on the subject except that I thoroughly agree with everything in all of these papers, and I have to thank Mr. Newman for the information and the start he gave me in the state of Tennessee. He very kindly, when I took up the matter with him, sent me all the information he had, all the literature, and we went to work on the proposition. To those Commissioners who have not undertaken the work in their state, I want to say to you that it is remarkable the progress that you can make in a short length of time. We have in the state of Tennessee now—the men have not finished the work—we have two inspectors in conjunction with the government men making the entire state, visiting every shipping point of any importance in the state.

The inspectors go into the produce houses, candle eggs, and ascertain the percentage of bad eggs. They also go to the receiving books and jot down the names of the farmers who are delivering the eggs to the producers, the amount of eggs that are delivered on any special delivery and the amount when candled, the amount we found wrong. These are sent into the office and we immediately write these farmers of the condition in which we found their eggs and tell them what will happen if they continue to sell eggs on a straight basis, and take money for a case of eggs as a whole, whether they are good or bad. We have gotten quick results that way; then we follow it up.

We are now sending out another set of inspectors over the same territory and where we find a man has paid no attention whatever to our first letter we prosecute him. In the city of Chattanooga they made fun of us. There was a great deal of obstinate disregard. They just wanted to show us that they would not do it, and we went back the second time and we called on thirty-five people, and thirty-two were prosecuted and fined. In other words, we made Christians out of them.

Now, we find this question comes up, "How in the world will a poor farmer, living way back in the hills, how is he going to take care of his eggs when he only comes to town once in two or three weeks to sell his eggs?" But when the merchant says to him, "I have to candle your eggs and pay you only for good ones, that is the way they do with me," and he goes on to say, "Half of the eggs that were brought in to me this morning were bad eggs and we can't take them," well, the farmer goes home and begins to think over the proposition, how he can best take care of his eggs before he brings them into the town.

So we are going right back to the basis of it. We are not stopping at the producer, we are even going after the huckster. We have had men in automobiles stop the huckster in the middle of the road and candle his eggs, and we treat them just the same as we do the producers.

Where we are getting the results is this way: As I said before, the farmer is getting his eggs refused when he brings them in, notwithstanding the fact that he can not bring them except every two or three weeks. He takes particular pains while he is keeping the eggs to keep them under proper conditions, so that he can get money for them. We made up our mind to go to the basis of the thing and go right up along the line until we reached the biggest man in the state. I believe that when we finish our work the report will show that we have reduced the percentage of bad eggs to at least five per cent, I might say, a conservative percentage of about six per cent. I think it is wonderful work, and we are getting remarkable co-operation from the business men in the state. Even the little man in the small town is already getting out circulars telling what the State Department expects and he mails them out to his country customers. The results that you get are surprising when you go at it right.

President Barney: Are there any other Commissioners who would like to say a word?

Mr. F. H. Fricke: I would like to ask Commissioner Newman a question. What sort of candlers are these people that are at these first receiving stations, these small merchants, for instance?

Secretary Newman: You mean what kind of men they use?

Mr. F. H. Fricke: What kind of men they are.

Secretary Newman: They are all very crude until after the inspector has been with them. We started in two years ago instructing them and we got out bulletins, some with cuts and descriptions, and, as I say, for a year and a half we were doing missionary work with them, spending days with them getting the fellows together and in the evening we would have a meeting. It was long, hard work. Every once in a while you will find a fellow who has come in recently and does not know anything about it and then you have got to use your judgment as to whether he is too green at the work and whether you are to prosecute him or not.

Out of the four hundred hearings that we held we started

350 prosecutions. For one reason or another we excused the other fifty people, or one-eighth; the other seven-eighths who were prosecuted made a larger percentage than we had in the other line.

Mr. F. H. Fricke: I would like to ask Dr. Tolman a question. What would you do in the case of the country merchant, the first receiving person handling the eggs and delivering them to the railroad station, and the eggs are held up for a day or a day and a half before they are shipped? It is not the fault of the first receiving person, but through some fault of the railroad company.

Now, these eggs are shipped to another state; would that be in violation of the interstate law, the shipment of these eggs, and who is at fault?

Dr. L. M. Tolman: It is a good deal the same proposition as in connection with the shipping of milk, practically the same proposition, and, of course, a man is not to blame for the things he does not do. The eggs themselves are guilty, of course, and they would be subject to seizure. Whether or not the man would be subject to prosecution I am not certain, but I do not think he is. I imagine after the thing is delivered to the railroad company and falls in the hands of the railroad company, I think the railroad company is responsible. I am not sure, it would have to be a legal question. I do not think any prosecution would be brought against the man who shipped eggs under those conditions.

Mr. Coleman (of Detroit): As a receiver of eggs I heartily endorse Mr. Newman's position and the work they do in Illinois. I would like to ask them if they have any objections to bind a current receipt in the spring season when they are all very good, when there is practically no loss anyway?

Secretary John B. Newman: That is a thing that we have not gone out in black and white on. We are rather reluctant to do it, but we recognize that in a spring that is cool and the weather is good you can grant that tolerance, but I believe that you ought to do it in that way, because you never know when you are going to have a hot, early spring, and then you are on record for current receipts and you do not want to be on record for current receipts when the weather is hot in an early spring. We kind of grant it as a tolerance. In other words, when it is a cinch, when weather conditions are good and there is no necessity to candle the eggs, why, we are going to understand it that way.

I think most receivers will transfer their eggs if they are any good at all, and they will take out the leakers and get the decent fillers in cases and they will notice some defects. As I say, we have not gone on record in black and white on it just for that reason; we want to be protected if we get a very hot spring.

While we always take into consideration shipments from some distances, naturally, what Mr. Fricke was asking. In our state, in this extreme hot weather, if the merchant himself has used due diligence and has not gotten down to the depot a half day ahead of the train, if, instead of setting them out on the platform he kept them in the proper place, we took cognizance of that. If he is careless and takes it down in the morning when he knows the train does not come until six o'clock at night, we prosecute him.

We had quite a few cases this summer when eggs were taken in gathered on Saturday of that week, and Saturday is a busy day with the farmer. He candled them and took them to the train. The store was shut on Sunday and Monday evening the local freight took the eggs to an adjoining city. I am speaking about the neighborhood of Lincoln, Illinois. Now, by the time the eggs got over there a good many were beginning to show unfit. That country merchant had done about all he could. He had to close his store on Sunday; that was a habit. He could not ship them Monday night, the weather was fierce. Our men saw those eggs Tuesday morning and they noticed the difference, too, by the way, and those people were given another chance.

President Barney: Now, I notice we have with us Mr. A. N. McNeil, President of the National Butter and Egg Board of Chicago, and ex-President of the National Butter and Egg Association. I am sure you would like to have a word from Mr. McNeil. (Applause.)

REMARKS OF CHAS. E. McNEILL, CHICAGO.

Mr. Chairman and Members of the Convention: The position the Chicago Butter and Egg Board takes in this matter must be evident to you from the fact that I am here today, duly delegated by our Board to attend this meeting. We want to show that we are willing to co-operate with you every way that we possibly can. I might say that when this egg question came up some time ago I was then President of our national organization and Mr. Newman asked me to arrange a conference and we did.

The first conference was with regard to these "reject" eggs. The matter was all worked out by committees there and we arranged how these eggs were to be shipped and identified and so on.

The next conference was with regard to the "current receipt" eggs, and that also was all settled. Now I feel with regard to these current receipt eggs that you want to handle that matter in a reasonable way. I do not believe that it is your idea to be so technical as to make it almost impossible for the producers and the middlemen. I believe, and have always believed, that the farmer should not be paid for the rotten eggs. I think it is an economic waste, almost an economic crime, because it means that these eggs have to pay freight and when they reach the distributing center there is the cost of having them handled, and that cost is not light in Chicago today, as we are paying our egg inspectors or candlers forty cents an hour to do the work.

I believe the state of Illinois has started in the right direction, but I think in starting a proposition of this kind, as I said to Mr. Weigle, that you must not be too technical about it. I think if in the first year or the first season you can get the first receiver to throw out the rotten eggs, the black rot, the red rot and the heavy spots, that you are going a long way along the line of progress. No man who has never had any experience is able to candle eggs properly, and in the small towns you can't have that work done by experts. There

are not enough of them to do it. Therefore, you must put it up to the first buyer to do the best he can, and the best he can do, I think, is to throw out the bad eggs. As he goes along he will become educated and will learn to do better than that.

I think the time is coming when eggs will be bought practically on a quality basis. We have never had a better year to demonstrate how this candling proposition will work out than the present year.

I want to say to you that regardless of the fact that these eggs are being candled at the original point of shipment, that where there is heat in the eggs, as there must be when the temperature has been running from ninety to one hundred degrees Fahr. a week at a time, that these eggs will deteriorate while they are being shipped and by the time they reach the market will show a good many bad eggs, possibly in some cases more than the five per cent that the Federal Government specifies. You can not get away from it. Last year the percentage of bad eggs was small because the weather throughout the summer months was reasonably cool. This year is an extraordinary year, and that is the reason, I say, you should not be too technical. If you find that a man is trying to do what is right you must take these weather conditions into consideration and not live up to the actual letter of the law, but do what appears to be right in the matter. The man who is not candling his eggs at all should be punished.

I know that these egg men, a great many of them, are willing to be instructed. I know a case out in Dakota in Commissioner Frary's territory, where we sent our own egg inspector to one of the large concerns there and told them how to put up eggs for storage. We had been doing business with them for the last four years, three years of which their storage packed eggs were a joke. One case would weigh fifty-two pounds and another case fifty-seven pounds, and yet they thought they were doing right.

We had our man stay with them two days and I want to tell you there were no finer eggs came in to us this season than the eggs that came in from that shipping point. The reason they could not pack the eggs right before was because they did not know how but they were willing to learn. I believe that the Commissioners should work with the organizations in this business of ours. The National Association has a business manager at headquarters, and when the five per cent ruling came out that was sent in the shape of a circular to all of our members so that they might know what was required. The Association is ready to co-operate at any time and in nearly all of the states we have branches of the Association, or at least members of the Association, and State Vice-Presidents that will look after the interests of our organization in every state where we are represented.

If they could get in touch with the local Commissioner in each State I think the co-operation would do lots of good. I believe Miss Johnson overlooked one matter this morning in saying that she thought the consumer and the producer should get together. I believe she left out one big element and that is the distributor.

The distributor knows things about the handling of the goods he is interested in that neither the producer nor the consumer knows anything about, and if there is full co-operation it should be along this line, because we are all interested in better foods.

I am very glad to have had this opportunity of meeting with you this morning, gentlemen. I want to compliment you on one thing that I could never compliment our own organization upon, and that is on the attendance at the business sessions. (Applause.) You are all here. Some of our men travel a thousand miles to attend our convention and then spend most of the time down in the lobby buying and selling. There are problems of great interest brought to the attention of the meeting and they are not there to hear them, but you men are here, you are interested in the program, you are here to try to better your business, and I wish that we could get our men to do the same thing. I thank you.

President Barney: Commissioners, I think that is a very nice compliment to the meeting here. I notice Dr. Klein of the Illinois Department over here and I would ask him if he has a word to say with reference to any phase of the work in Illinois.

Dr. David Klein: Mr. Chairman, it has been my part of the work in Illinois for the past two years to watch the Chicago market, to have supervision over the egg breaking establishment and to take charge of the educational work. If Chicago in the past enjoyed the reputation of being the rottenest egg market in the United States, I wish to say that at the present I believe it is the cleanest big egg market in the United States. We do not have the traffic in rotten eggs; there are no large shipments of rotten eggs coming into Chicago; there is no open traffic in rotten eggs from the street to the bakers.

We have, through the splendid co-operation of the Chicago Egg and Butter Board, succeeded in eliminating the sale of rotten eggs from the candling establishments on Water and Randolph Streets. We have succeeded in educating the merchants to dispose of their rotten eggs, not in cases, but in rotten egg boxes, especially designed for the purpose. We do not allow merchants to put back rotten eggs in cases. If it has come to the attention of any of the other Commissioners in the other states that Chicago merchants are advertising undergrade eggs, I would be pleased to receive specific information in regard to each of these cases, because we want to clean up the market thoroughly.

Regarding the egg breaking industry, you probably are aware that Illinois is the only state that requires licensed supervision of egg breaking establishments, with a large license fee. That means that the ten establishments are exercising more care than probably any similar number of egg breaking establishments in the United States. I have a feeling that some of the "rejects" eggs that used to come to the Chicago market no longer come in the form of cases, but are being broken out in the several states, and I would like to say that if those eggs come into Chicago markets and are offered for sale in competition with the eggs of our licensed egg breaking establishments that they will have to be of the quality which

we prescribe for our breaking establishments, otherwise we will work in co-operation with the Federal Department and try to keep those eggs out of the state of Illinois. I know that in certain states they are breaking eggs under no supervision whatsoever.

Regarding Mr. Fricke's question of what kind of candlers we have. In our state, in the state of Illinois, two years ago we had no candlers, they knew nothing about candling eggs whatsoever. They did not even know what a candler was. Today a large number of them do know, but we don't require them to grade eggs, and that seems to be an important point to start out with. It is a mistake to try to make the country merchant grade eggs for city use.

The city of Chicago grades one way, the city of Boston grades another way, the city of New York a third. As a matter of fact the different people on the streets of Chicago grade different grades in different ways. You take twelve egg candlers from twelve different houses in Chicago and have them grade a lot of eggs and they are going to grade them differently. I have never seen a more confusing condition than the attempt to grade eggs for city consumption. I think it is a mistake to try to get the country men to meet those grades. All we ask them to do is to take out the bad eggs and send the rest as best they can.

As an example of what may be done in food control by a combination of regulation and education, I would like to speak just a few moments about our recent educational work. We started out first with inspection and with prosecution. That woke the people up to the fact that they had to do something. It was not a joke, they had to get busy. Then we sent our educational exposition into the field with wonderful results. We have had men come thirty-five and forty miles to these egg candling demonstrations, because they knew that it was up to them to do something to candle eggs. If we had not started the prosecution campaign first they would not have paid any attention to our educational work. They would have thought it was a joke and would have thought it was for the other fellow. But when we started it with prosecution work and showed them we were in earnest, they were willing to take an interest in our educational work.

It seems to me this is a clear case of the nice balance that should exist between the prosecution and the educational work of the various Commissioners.

President Barney: Gentlemen, it is getting well toward one o'clock and I think that we had better adjourn. I want to make one announcement, and that is, I would like to have you all back promptly at two o'clock. The Sectional meeting, Section A, will meet in this room at 3:30 and Section B will meet in another room.

Now we will have Dr. Price's paper at two o'clock and we may be able to get the report of the Resolutions Committee right after that paper, and then probably will come the selection of the next place of meeting. I do not know of any other announcements to make and we will stand adjourned until two o'clock.

REPORT OF COMMITTEE ON DEFINITIONS AND STANDARDS.

BY DR. E. F. LADD, CHAIRMAN.

Mr. Chairman and Gentlemen:

During the past year the Standards Committee has met on several occasions and run over the question of standards. There have also been numerous meetings and hearings where the trade and manufacturers were able to appear before the committee and present any information or data that they might have. Of course, very few of the topics under consideration have been completed. We have a very large number to be considered at some future meeting. I might say that under consideration at the present time, but not completed, are Standards and Definitions for jellies, jams and marmalades, for cereal products, flour and so on, for confectionery, baking powder, bread, spices, canned goods, homeogenized products, dried fruits, soft drinks, fruit juices, berry products, cheese, milk, etc., and citrus fruit. None of these have been completed and are not ready for presentation at this time. It is a custom, or it is the requirement, that definitions and standards be presented first to this Association and approved.

If they are approved here they are presented to the Association of Official Agricultural Chemists for their approval, after which they go to the Secretary of Agriculture. Therefore, it will be necessary to act upon these definitions and standards as presented here and I shall present each standard and ask for its adoption if it meets with your approval.

President Barney: Now, gentlemen, I think it would be better to make a note of any question you desire to ask and not interrupt Dr. Ladd until he is finished.

Mr. F. H. Fricke: Mr. Chairman, I do not know that that would speed up the action any for the simple reason that we are asked to vote on each individual standard. The reason I ask this is that the state of Missouri adopted the standards adopted by the United States Government, that is the provision in our law. Now I would like to get into these standards every word that is necessary in order to prosecute under it.

President Barney: Will that be satisfactory to you, Dr. Ladd, to read each one of them?

Dr. E. F. Ladd: Yes. (Dr. Ladd reading.)

DEFINITION AND STANDARD FOR EVAPORATED APPLES.

Evaporated apples are evaporated fruit made from peeled, cored and sliced apples and containing not more than 24 per cent of moisture.

Pending the official adoption by the A. O. A. C. of perfected methods for estimating moisture in evaporated apples, the following trade method shall be employed:

Dry a representative unminced sample for four hours at the

temperature of boiling water and determine the loss in weight. Approved August 7, 1916, by C. L. Alsberg, J. K. Phelps, E. F. Ladd, William Frear, Julius Hortvet, John Phillip Street.

DEFINITIONS AND STANDARDS FOR SODA WATER FLAVORS.

1. Ginger ale flavor is the water-soluble product obtained from ginger, with or without flavoring substances which do not simulate the flavor or pungent effect of ginger. The predominating effect of the product is that of ginger.

2. Ginger ale with capsicum flavor is the water-soluble product obtained from ginger and capsicum, with or without other flavoring substances. The predominating flavor of the product is that of ginger.

3. Sarsaparilla flavor is the water-soluble product prepared with oil of sassafras and methyl salicylate or oil of essential oils or extract of sarsaparilla.

SODA, SODA WATER.

1. Ginger ale is the carbonated or artificially carbonated beverage prepared with potable water, acidulated sugar (sucrose), sirup and ginger ale flavor.



DR. E. F. LADD.

2. Ginger ale with capsicum is the carbonated or artificially carbonated beverage prepared with potable water, acidulated sugar (sucrose) sirup and ginger ale with capsicum flavor.

3. Sarsaparilla is the carbonated or artificially carbonated beverage prepared with potable water, sugar (sucrose) sirup and sarsaparilla flavor. It may or may not be acidulated.

Note: It is the opinion of the committee that the use of sugar color in ginger ale, ginger ale with capsicum or sarsaparilla soda water flavor or the corresponding soda, soda water, does not require that they be labeled as imitation products.

1. It is the opinion of the committee that citric acid when of the purity required by the U. S. P. is permissible for the acidulation without a statement on the label.

Additional definitions and standards for soda water flavors, soda, soda water, under consideration.

Approved, August 7, 1916, C. L. Alsberg, E. F. Ladd, W. F. Hand, J. K. Phelps, William Frear, Julius Hortvet, John Phillip Street.

DEFINITIONS FOR EDIBLE FATS AND OILS.

General definition:

Edible fats and edible oils are such glycerids of the fatty acids as are recognized to be wholesome foods. They are dry and sweet in flavor and odor.

Cacao butter, coca butter is the edible fat obtained from sound cacao beans either before or after roasting.

Coconut oil, copra oil is the edible oil obtained from the kernels of the coconut.

Cochin oil is coconut oil prepared in cochin (malabar).

Ceylon oil is coconut oil prepared in Ceylon.

Corn oil, maize oil is the edible oil obtained from the germ of Indian corn (maize) (*Zea mays* L.).

Cotton seed oil is the edible oil obtained from the seed of the cotton plant (*Gossypium herbaceum*, L. or other species of *Gossypium*).

Olive oil, sweet oil is the edible oil obtained from the sound, mature fruit of the olive tree (*Olea europaea* L.).

Palm kernel oil is the edible oil obtained from the kernels of the fruit of the palm tree (*Elois guineensis* L.).

Peanut oil, arachis oil, earthnut oil is the edible oil obtained from the peanut (*Arachis hypogaea* L.).

Poppy seed oil is the edible oil obtained from the seeds of the poppy (*Papaver somniferum* L.).

Rape seed oil, colza oil is the edible oil obtained from the seeds of the rape plant (*Brassica campestris*).

Soy bean oil, soja oil is the soluble oil obtained from the seeds of the soy bean plant (*Dolichos soja* L., *Soja*, *Hispida*, *Sieb et Zucc.*, *Soga japonica*, *Savi.*, *Blycine hispida*, *Maxim.*, *Glycine Soja* L.).

Sesame oil, gingili oil, teel oil, benne oil is the edible oil obtained from the seed of the sesame plant (*Sesamum indicum*, *De Candolle* L., *Radiatum Schum* and *Thonn*).

Sunflower oil is the edible oil obtained from the seeds of the sunflower. (*Helianthus annuus* L.).

Approved, August 7, 1916, C. L. Alsberg, J. K. Phelps, E. F. Ladd, William Frear, W. F. Hand, Julius Hortvet, John Phillip Street.

Note: This is subject to revision of the botanical terms used in definitions of Rape, Soy bean, Peanut Oils.

DEFINITIONS AND STANDARDS FOR (1) SWEETENED CONDENSED MILK; (2) CONDENSED SKIMMED MILK; EVAPORATED SKIMMED MILK, CONCENTRATED SKIMMED MILK; (3) SWEETENED CONDENSED SKIMMED MILK, SWEETENED EVAPORATED SKIMMED MILK, SWEETENED CONCENTRATED SKIMMED MILK; (4) DRIED MILK; (5) DRIED SKIMMED MILK; (6) MALTED MILK.

1. Sweetened condensed milk is the product resulting from the evaporation of a considerable portion of the water from milk to which sugar (sucrose) has been added. It contains, all tolerances being allowed for, not less than twenty-eight per cent (28%) of total milk solids, and not less than eight per cent (8%) of milk fat.

2. Condensed skimmed milk, evaporated skimmed milk, concentrated skimmed milk, is the product resulting from the evaporation of a considerable portion of the water from skimmed milk, and contains, all tolerances being allowed for, not less than twenty per cent (20%) of milk solids.

3. Sweetened condensed skimmed milk, sweetened evaporated skimmed milk, sweetened concentrated skimmed milk is the product resulting from the evaporation of a considerable portion of the water from skimmed milk to which sugar (sucrose) has been added. It contains, all tolerances being allowed for, not less than twenty-eight per cent (28%) of milk solids.

4. Dried milk is the product resulting from the removal of water from milk, and contains, all tolerances being allowed for, not less than twenty-six per cent (26%) of milk fat, and not more than five per cent (5%) of moisture.

5. Dried skimmed milk is the product resulting from the removal of water from skimmed milk and contains, all tolerances being allowed for, not more than five per cent (5%) of moisture.

6. Malted milk is the product made by combining whole milk with the liquid separated from a mash of ground barley malt and wheat flour, with or without the addition of sodium chloride, sodium bicarbonate, and potassium bicarbonate in such a manner as to secure the full enzymic action and by removing water. The resulting product contains not less than seven and one-half per cent (7½%) of butterfat and not more than three and one-half per cent (3½%) of moisture.

Approved: C. L. Alsberg, J. K. Phelps (except paragraph No. 1), E. F. Ladd, William Frear, W. F. Hand, Julius Hortvet, John Phillip Street (except No. 1).

Disapproved: J. K. Phelps (paragraph No. 1 only), John Phillip Street (paragraph No. 1 only).

Mr. F. H. Fricke: In the first part of your report about evaporated apples will it be necessary to put in there the word unsound?

Dr. E. F. Ladd: No, I don't think so.

Mr. J. D. Miller: I am not a member of the Association but I represent a great interest, and I would like to know if I might be permitted to ask a question at this time, if it is not interrupting Professor Ladd, and that is this: I understand from Professor Ladd's statement that this will be voted upon here and be submitted for approval.

Dr. E. F. Ladd: For the approval of the Association of Official Agricultural Chemists at their meeting in November.

Mr. J. D. Miller: And then to the Secretary of Agriculture.

Dr. E. F. Ladd: Yes.

Mr. J. D. Miller: The question I wish to ask is this, and I ask it because it is one in which we are very much interested. What opportunity will be given to the trade to discuss in advance the proposed standards and have any discussion of them to any extent that may be absolutely necessary?

Dr. E. F. Ladd: I might say in reply to that that the trade have already had their opportunity. Public hearings have been held at one point, in Buffalo, N. Y., and none of these are presented until after there have been public hearings. This met with the approval of all of the large packers and handlers of fruit, I understand, that were present at the hearing. The announcement was published throughout the country and will give an opportunity either in person, by attorney or by mail to be heard.

Dr. W. P. Cutler: May I ask Dr. Ladd a question? As I understand, sir, condensed milk can have under the standards as you have given us, only the sugar sucrose.

Dr. E. F. Ladd: It is so provided under that definition.

Dr. W. P. Cutler: Could I understand then, sir, that your committee proposes to exclude dextrose as a possible preservative or as a possible addition to condensed milk.

Dr. E. F. Ladd: I should assume that that should have to be included on the label to show its presence.

Dr. W. P. Cutler: Because I presume the Standard Committee recognizes the fact that dextrose is a sugar, that it might be used in condensed milk, possibly with great advantage from the standpoint of food. For example, I know of certain condensed milk factories that are making investigations with reference to the use of dextrose in condensed milk, with a view to augmenting its value as a baby food. Now I judge from that,

or rather from what you say, that it could not be condensed milk, as such could not be labeled unless they say condensed milk with dextrose, if that were the case.

Dr. E. F. Ladd: Any product that differs from the standard recognized could be corrected by the label to show that the product is harmless.

Dr. W. P. Cutler: I was wondering, sir, if it would be proper to label it "condensed milk with dextrose."

Dr. E. F. Ladd: I could not attempt to answer that.

Dr. W. P. Cutler: Let me put it this way: Condensed milk is composed, according to that standard, as I understand it, of milk and sucrose. Then would it be condensed milk if there was no sucrose in it?

Dr. E. F. Ladd: It will not be condensed sweetened milk. There is a difference. Sweetened condensed milk is one thing and evaporated milk is another thing.

Mr. B. L. Purcell: Was not the definition you have for evaporated milk acted on a year ago?

Dr. E. F. Ladd: The definition for evaporated milk was acted on a year ago and this is a continuation.

That completes the definitions and the standards as they are ready for presentation and consideration of this Association, and I move that the definitions and standards as offered be approved.

Mr. H. F. Fricke: I second the motion.

Mr. R. E. Rose: Did I understand you to say that you have a report on citrus fruits?

Dr. E. F. Ladd: That is a tentative report but not ready for presentation for the action of the committee.

President Barney: Gentlemen, it has been moved and seconded that the report be accepted. Is there any discussion on this motion? If not, all those in favor will please give their assent by saying "Aye"; contrary, "No." The motion prevails.

We have with us this afternoon in place of Dr. Price one of his assistants, the chief milk inspector of Detroit, Mr. C. H. Chilson. Mr. Chilson will talk to us for a short time.

ADDRESS OF C. H. CHILSON.

CHIEF MILK INSPECTOR, DETROIT.

Mr. Chairman, Ladies and Gentlemen: Milk is a subject of universal importance and is subjected to much attention by all interested in the welfare of the public. The reasons for this are two-fold:

First: Milk is a perfect food. It is a balanced ration in itself. This means that it contains, first, material which children need for growth; second, materials which young and old alike need for repair of their bodily machinery; and, third, materials which both need for fuel which provides one with heat and energy necessary for work. Milk alone then contains constituents in itself which other foods only contain alone, namely carbohydrates, fats and proteids. These constituents give milk a certain food value as shown by one of our recognized scientists, who says that "one quart of milk is equal to three-quarters of a pound of beef, two pounds of chicken, eight eggs, two pounds of codfish, etc."

Second: Milk with its constituents offers the best media known for growth of both pathogenic and non-pathogenic organisms and therefore must be handled with the utmost care before it can be regarded as safe and fit food for human consumption. To get and maintain a safe supply this product must bear careful inspection.

For the past thirteen years Detroit has been putting forth every effort to better its supply and I can very frankly say it has not been in vain.

Our inspection is divided into two units, city and country, both carried on from an educational standpoint. Prior to the systematic system now carried on, conditions seemed beyond redemption.

The intensity of the filth found in farms and dairies is almost unbelievable, its universality appalling. No attempt was made to clean the cows or the stables; light and ventilation were unheard of for cows, and to strain and cool milk was only a high-tone idea of a few book farmers. Today those conditions are only blots on the memory of the dairyman, and in their place cement floors, stantions, well lighted and ventilated stables take their place. These changes did not happen overnight, nor in a month, but have taken years. Farmers were not threatened or bullied, but instead were taught the principles of good dairying and why clean milk was the best.

The best means of getting at those conditions came to light in 1910 when Detroit introduced the score card for country inspection, and it has proved a most valuable single means of forwarding the campaign for pure and wholesome milk. It left no room for argument, as it showed the exact conditions, gave the inspection department something definite to work upon, and showed the farmer that inspection was based on business principles and meant business. Stables were put into condition. Results were showing up and a better future was forthcoming.

The following table (1) shows the results of systematic inspection:

AVERAGE SCORE.	
First year	37
Second year	47
Third year	49.3
Fourth year	50.7
Fifth year	52
Sixth year	54.2

Not only was much stress put on the farm conditions but a 60 degree limit was placed on milk arriving at station and in the city and the following are results of the efforts on this important phase of the problem:

CHART 2—NUMBER OF CANS CONDEMNED.

1909	4.2 per cent
1910	5.7 per cent
1911	2.6 per cent
1912	1.6 per cent
1913	1.3 per cent
1914 .....	.15 per cent
1915 .....	.3 per cent

The country receiving stations is also a large factor in production of clean milk. A clean, well regulated station sets an example for the farmer. The past year has seen considerable

attention given to these stations. Bacteria counts have been made of the milk for a number of these places and the following charts show the results of inspection at the different receiving stations. Station A and patrons of this station have been subject to inspection for the last five years, while station B has only been established a short time and patrons are receiving their first inspection. Both samples were taken the same week. Chart 3.

With the country inspection under way and the product starting right, a systematic inspection was started in the city. The numerous back yard dairies, with their unsanitary methods, were made to clean up. Many samples of milk were taken and the following charts show the results after several years of work against the unscrupulous dairy man.

Chart (4) shows reductions in adulterations and Chart (5) shows same in case of preservatives.

The dairyman began to realize that he could not continue handling milk in an unsanitary way and help in producing a clean product. New machinery for handling milk played an important part in the milk situation. It offered a sanitary means for producing clean milk, and made it easier for the creamery man.

Cooling vats, bottle fillers, and other appliances were installed in the various plants and the department's efforts put forth for better conditions were materializing. Each year saw changes made which were for the better. The person who was not interested in milk except from a dollar-and-cent standpoint was fast becoming discouraged, and the milk business was going to the clean dealer, for the people themselves were taking an interest.

In 1910 when the bottling ordinance became effective, the public was greatly benefited. They could tell just what kind of product they were getting. It was a great "safety first" movement. Occasional milk exhibits have also helped in educating the producer and consumer. Demands for better milk were made evident in 1911 when the Certified Milk Commission "certified" a farm for the production of "certified milk." This farm was certified in May and by July it was supplying 580 quarts per day to the city. There are now two certified farms and two other farms producing a "Class A" milk for the Detroit market.

In May, 1915, all milk sold in the city was required to be pasteurized. Creamery men were notified six months in advance of this, and by June all plants were equipped with pasteurizing machinery. This was a big step in the safeguarding of the milk supply and the results have been very gratifying. Out of 142 creameries prior to this pasteurizing rule, 52 are now in operation and those 52 are now practically new plants, fully equipped, not only with the pasteurizing machinery, but with apparatus that will thoroughly clean and sterilize the utensils. The consolidation of several of the small dairies into one large plant was another big thing the pasteurization rule accomplished, and this will continue. Every week the city inspectors learn of the consolidation of several small plants which is going to take place in the near future. These changes have not been quick and temporary, but have taken some time and we believe will be lasting. That specific results have been obtained and benefits deemed can be shown by Chart (6) in infant mortality.

Prior to the pasteurization our typhoid rate was 29.4. The last year it dropped to 13.8. Milk is not entirely responsible for all disease conditions, but a systematic inspection makes a big difference when statistics are compiled and above all the public becomes awakened to the importance of a well regulated milk supply.

Mr. Thomas P. Sullivan (Illinois): I would like to ask the speaker what was used in the adulterated milk.

Mr. C. H. Chilson: Water was used, that is the principal adulteration.

President Barney: Are there any other questions? If not, what is the pleasure of the convention. I believe this is the last paper. Do you desire to take up the place of the next convention or the Resolutions Committee first.

Mr. B. L. Purcell: I move that we proceed with the Resolutions Committee. I do this because I am interested in some of them and I expect to leave on an early train today.

Motion seconded and carried unanimously.

President Barney: Mr. Flanders is the chairman of the Resolutions Committee.

REPORT OF RESOLUTIONS COMMITTEE.

BY GEORGE L. FLANDERS, NEW YORK.

Mr. President and Gentlemen: The full committee was not present. Mr. Barnard and Mr. Jackson were not present. The majority of the committee were there and we acted.

Resolution No. 1 emanates from the committee, and is as follows:

"Resolved, That this Association hereby expresses its appreciation to Parke, Davis & Co. for its painstaking efforts to inform the members of the Association as to its methods of manufacture, and for its hospitality; and the Postum Cereal Company of Battle Creek for its kind and generous invitation to visit its plant."

Mr. President, it has been customary for people offering a resolution to move the adoption of the resolution. It does not strike me as being the proper thing to do. If it is the proper mode of procedure, I will make the motion, but I would rather that it would emanate from the floor.

Mr. W. W. Randall: I move the adoption of the resolution.

Motion seconded.

President Barney: It has been moved and seconded that the resolution be adopted. Is there anything to be said upon the subject? If not, all those in favor of the motion signify by saying "Aye"; contrary, "No." It is adopted.

Mr. George L. Flanders: Resolution No. 2 (reading):

"Whereas, The dairy and food interests of the country are interested in the development of cheaper methods of transportation and the utilization of the waste products of the farms of the nation; therefore, be it

"Resolved, That we favor a suitable measure providing for the development by the Department of Agriculture for the man-

ufacture of industrial alcohol from the wastes of the farms, thereby giving to the country cheaper fuel for transportation and the utilization of the by-products of such manufacture as food for farm animals."

This resolution was reported on favorably by the committee. President Barney: What is your pleasure with the resolution, gentlemen?

Mr. John McCabe: I move its adoption.

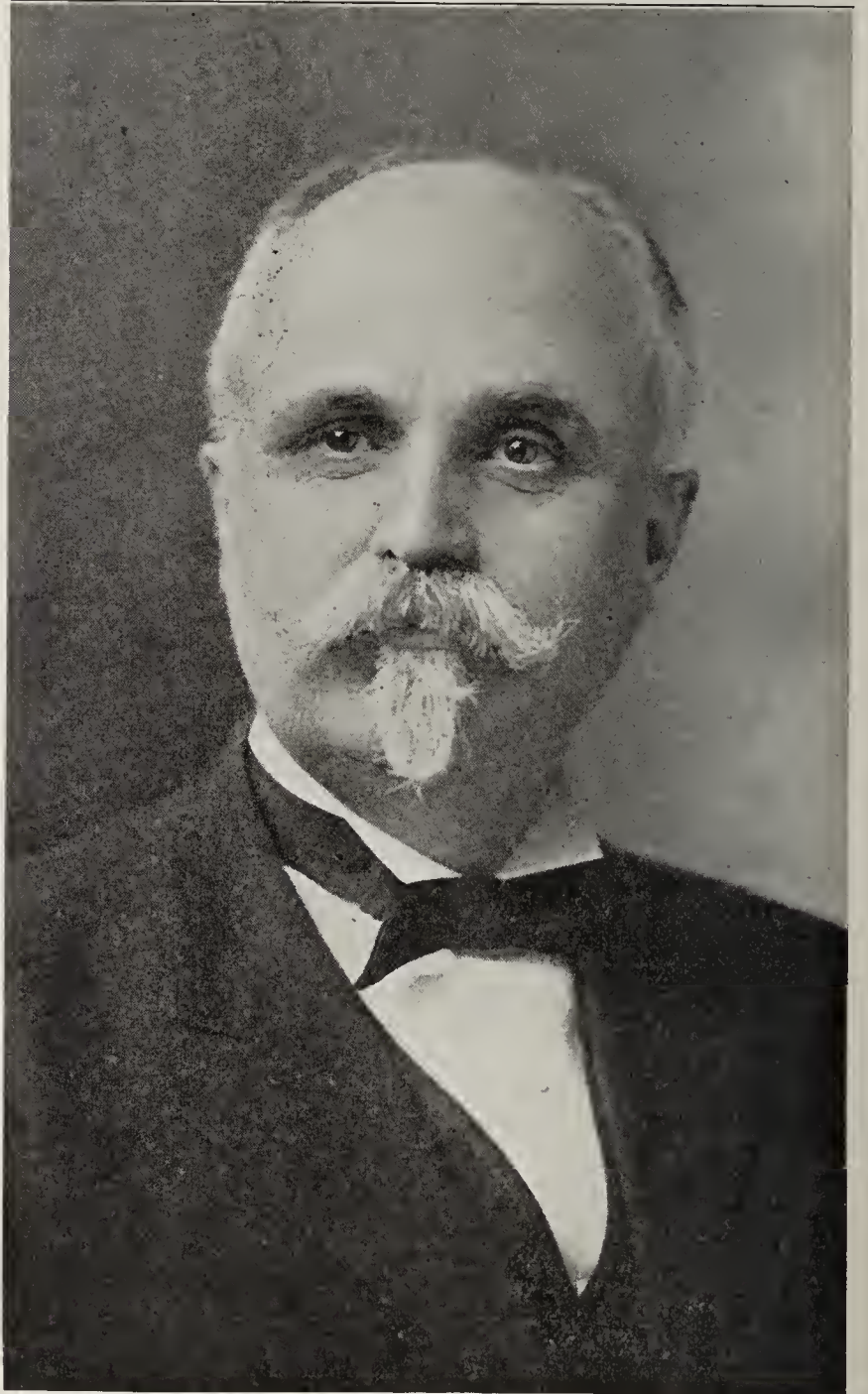
Motion seconded and carried, and the resolution was adopted.

Mr. George L. Flanders (reading): Resolution No. 3:

"Whereas, There has been established in the United States Department of Agriculture an office of State Co-operative Food and Drug Control, and it has been demonstrated that this office is an effective agency for obtaining uniformity in the administration of state and federal food and drug laws and is securing co-operation in their experiment; and

"Whereas, Experience has shown that the activities of this office in extending aid to the states is limited by lack of authority and lack of funds; therefore, be it

"Resolved, That Congress be requested to appropriate ade-



GEORGE L. FLANDERS.

quate funds and confer upon the office of State Co-operative Food and Drug Control to enable it to furnish more extended assistance to the several states to assist them to prevent sales within the states of adulterated and misbranded articles; and be it further

"Resolved, That copies of this resolution be sent to the Secretary of Agriculture, the Chief of the United States Bureau of Chemistry and the members of the Committee for the House of Representatives on Agriculture and the members of the committee of the United States Senate on Agriculture and Forestry."

This resolution was reported on favorably by the committee.

Mr. R. E. Rose: I move the adoption of the resolution.

Motion seconded.

Dr. S. J. Crumbine: It occurs to me that several words have been omitted right after the words "misbranded articles." I suppose that refers to foods and drugs and if so that should be stated.

Mr. George L. Flanders: The committee changed the words a little and that is why I hesitated a little in reading this part on account of the interlineations. (Reading):

"Therefore Be It Resolved, That Congress be requested to appropriate adequate funds and confer upon the office of State Co-operative Food and Drug Control to enable it to furnish full information and extend assistance to the several states neces-

sary to enable them to prevent sales within the states of adulterated and misbranded articles."

That is the way the original section read. The committee thought that it should not express itself to the effect that the Department could give full information, that is a very strong statement, but "more extended assistance," so we undertook to change it in the short time that we had to read "more extended assistance," and not to proceed on the assumption that this body, no matter how well equipped, could give absolutely full information to the states "to assist the states," not "to enable them," leaving out the idea that the states could not do anything at all if they were not assisted, but to assist them to prevent sales of adulterated and misbranded articles. That is the amendment.

Dr. S. J. Crumbine: I would like to add right after the word "articles" "of food and drugs."

Mr. George L. Flanders: You mean right after "adulterated and misbranded articles." I suppose the words were intended by the writer. We did not change the wording. Articles should cover either food or drugs. I do not know who the introducer of the resolution was.

President Barney: Is there anything further to be said upon the question? If not, all those in favor of the adoption of the resolution signify by saying "aye"; contrary, "no." It is adopted.

Mr. George L. Flanders: A resolution was introduced and given to the committee and the committee has taken the authority on to itself to offer a substitute. I will read the original resolution and then read the substitute. We have reported favorably on the substitute.

The original resolution as introduced reads as follows (reading Resolution No. 4):

"Whereas, Certain federal and state laws require that food products shall be pure and wholesome, to the end that no harm shall come to the consumer; and

"Whereas, Certain foods are commonly stored and displayed in and sold from original packages (bulk containers), such as boxes, barrels, bags and other similar containers and may easily be so contaminated by flies and dust and by such animals as dogs, cats, rats and mice, and by promiscuous handling as to be unfit for human food; it is hereby

"Resolved, That the protection of bulk dry groceries wherever offered for sale demands and should receive from food and drug officials the same strict and vigorous attention which has resulted in the present high standard of purity in manufactured goods; and be it further

"Resolved, That all proper efforts of the members of this Association should be used to secure the passage of adequate laws for the protection of food stuffs and sufficient appropriations for the enforcement of existing laws, to the end that the dirty, unhealthy, unsanitary, fly and rat infested grocery, or other markets where food products are sold, shall be compelled to clean up and afford adequate and reasonable protection to their goods."

The committee was of the opinion, Mr. President and gentlemen, that that was stated rather drastically and essayed to modify the form of expression, which they present in the following language:

"Whereas, Foods are sometimes offered in such a manner that they are not adequately protected from contamination by insects, vermin, and other ways; and

"Whereas, The provisions of many of our food laws are not suited to give the authority requisite to secure the needed safeguards against such contamination;

"Resolved, That this Association favors the enactment of suitable laws or amendments to existing laws, so far as necessary, to enable the food executives reasonably to protect the public against the abuses herein described."

This was offered as a substitute and reported on favorably.

President Barney: What shall we do with the resolution, gentlemen?

Mr. W. W. Randall: I move the substitution of this last resolution, as read, for the first one.

Mr. E. F. Ladd: I second the motion.

President Barney: It has been moved and seconded that the substitute resolution which has been offered be adopted in place of the original one. Is there anything to be said upon the question? If not, all those in favor of the motion signify by saying "aye"; contrary, "no." It is a vote.

Mr. George L. Flanders: The following resolution was considered by the committee (reading):

"Whereas, During the progress of this convention, as well as in other sessions of this organization, attention has been directed to the lack of adequate inspection of dairy products entering into interstate commerce, and to the necessity of devising more effective methods for the safeguarding of the public health from the dangers of these unwholesome food-stuffs; and

"Whereas, It is not right that the Federal Government should permit this large volume of disease-carrying products to be poured into the channels of trade without restraint; and

"Whereas, The leading food and dairy journals and health officials throughout the country declare that large quantities of these dairy products entering into both domestic and foreign commerce are made from the milk of diseased cows and from milk that has been allowed to stand in unsanitary vessels and under unsanitary conditions until it has become soured, often putrid and otherwise contaminated and unfit for human food; that such dairy products are among the active agents in the spread of infectious diseases; and are therefore a menace to the general public health; and

"Whereas, By skilful manipulation with neutralizers, and with the aid of coloring matter, these unwholesome dairy products are put into such attractive forms that the mass of consumers are unable to distinguish same from wholesome products; while by further skilful manipulations, buttermakers are able to incorporate excessive amounts of water, salt and curd so as to keep within the prescribed limit of 16 per cent moisture and at the same time reduce the butterfat far below the standard of 82½ per cent; and

"Whereas, In the absence of proper and adequate inspection, dishonest producers are able to get into their plants all kinds of unmarketable rancid butter, low grade, uninspected fats and oils, and incorporate same into their product, and sell the

greatly increased output beautifully colored as and for butter, with but little chance of detection, thereby greatly endangering the public health, destroying the faith of consumers in all dairy products, and creating grossly unfair competition with the honest creamery man and butter maker; therefore be it

"Resolved, That Congress be urged to enact and put into operation, through such department as may be deemed best, some adequate plan of inspection and regulation of the manufacture of all dairy products entering into interstate and foreign commerce, to the end that the general public health may be conserved and the honest manufacturer be protected from fraudulent operations."

Your committee examined this resolution with some care and make the following report:

"The facts known to your committee do not warrant the conclusions drawn, as set forth in the preamble of this resolution and your committee is of the opinion that the Department of Agriculture has power under the provisions of the law as it now is to deal with the question, and therefore reported adversely."

Mr. Jones (Alabama): I move the recommendations of your committee be rejected, and that this resolution be adopted.

Secretary John B. Newman: I move that that resolution be laid on the table.

Motion seconded.

Mr. C. W. Garrison (Arkansas): I second the adoption of the original resolution.

Mr. Jones (Alabama): I move the recommendation of the Resolutions Committee be rejected and the resolution before the house be adopted.

Mr. B. L. Purcell: I second Mr. Newman's motion.

President Barney: I would like to inquire if the gentleman who made that motion has any credentials showing that he is a member of this Association.

Mr. Jones (Alabama): I am.

President Barney: I will have to ask the Credentials Committee whom they recognize from Alabama.

Mr. Frank A. Jackson: We recognize Mr. Moore.

Mr. Jones (Alabama): Haven't you a telegram from the Department of Agriculture authorizing two members to represent the state of Alabama?

Secretary John B. Newman: We have, but according to the constitution we could not accept it.

Mr. F. F. Farrell: I rise to a point of order, that this gentleman is out of order and he has no recognition upon this floor according to the Credentials Committee.

Mr. Jones (Alabama): I rise to a point of privilege. I came here as a member of this Association by virtue of the constitution and by-laws.

President Barney: The chair will hold that the report of the Credentials Committee will have to be recognized.

Mr. Jones: The report has not been adopted.

Mr. J. J. Farrell: Has the report of the Credentials Committee been adopted? If it has not been adopted I move you, Mr. Chairman, that the present proceedings be suspended and the report of the Credentials Committee be adopted.

Mr. B. L. Purcell: I second the motion.

President Barney: Is there anything to be said on the motion before the house?

Mr. Jones (Alabama): What motion?

President Barney: Mr. Farrell's motion to suspend the rules and adopt the report of the Credentials Committee.

Mr. Jones (Alabama): I rise to a point of order.

President Barney: Your point of order is not well taken, sir.

Mr. J. J. Farrell: The point of order that I object to and rise to is that we must know who the members of this Association are, and who are entitled to a voice on this floor, and if that report of the Credentials Committee has not been read, I wish to have it read so that the members of this Association might know who we are.

Motion seconded.

President Barney: Those in favor of having the report of the Credentials Committee read say "aye"; contrary, "no." It is a vote and we will have the report of the Credentials Committee, and then the balance of the resolutions.

REPORT OF CREDENTIALS COMMITTEE.

BY A. M. G. SOULE, MAINE.

Mr. Chairman: As a matter of history, it might be well to remind you that the tentative report was accepted. I think the record of the secretary will show that. But since then we have investigated three special cases, and I have the honor to submit the final report of the Credentials Committee. I will read the states that are entitled to vote, and, according to the opinion of the Credentials Committee, the representatives from the states:

Alabama, Y. M. Moore.

Arkansas, C. W. Garrison.

Connecticut, F. H. Stadtmueller.

Florida, R. E. Rose.

Illinois, J. B. Newman.
 Indiana, H. E. Barnard.
 Iowa, W. B. Barney.
 Kansas, S. J. Crumbine, S. A. Sayre.
 Kentucky, J. O. La Bach.
 Louisiana, Cassius Clay.
 Maine, A. M. G. Soule.
 Maryland, W. W. Randall.
 Michigan, James W. Helme.
 Minnesota, J. J. Farrell.
 Mississippi, W. F. Hand.
 Missouri, F. H. Fricke.
 Montana, W. M. Copleigh.
 Nevada, Sanford C. Dinsmore.
 New York, George L. Flanders.
 North Dakota, E. F. Ladd.
 Ohio, T. L. Calvert.
 Oklahoma, C. J. Kendle.
 Oregon, J. D. Mickle.
 Pennsylvania, William Frear.
 Rhode Island, Frank A. Jackson.
 South Dakota, G. G. Frary.
 Tennessee, Harry L. Eskew.
 Utah, Heber C. Smith.
 Vermont, Charles F. Whitney.
 Virginia, Benj. J. Purcell.
 Wisconsin, George J. Weigle.
 U. S. Dept., W. P. Jones, B. H. Rawl,
 W. C. Henderson.

CREDENTIALS COMMITTEE,

(Signed) Frank A. Jackson, Chairman,
 J. J. Farrell,
 F. H. Fricke,
 R. E. Rose,
 W. M. G. Soule, Secretary.

Mr. J. J. Farrell: I move the adoption of that report.

Mr. Jones (Alabama): Before you go to that report I appeal from the ruling of your committee by virtue of your constitution.

Mr. George L. Flanders: I rise to a point of order: We are discussing a subject now in which only the members of this Association can participate, and this gentleman has been declared by the Credentials Committee not to be entitled to the floor. He will have to get some one to speak for him.

Mr. G. W. Garrison: I appeal from the ruling of the Credentials Committee under Section 1, Article 10, on Membership, and I would like to have it read by the secretary.

Secretary John B. Newman (reading): "The voting members of the Association shall consist of the Secretary of the U. S. Department of Agriculture and the executive officer, or officers, of the state laws regulating the sale of drugs and dairy and other food products, or in their absence such officers subordinate to them in the administration of the laws regulating the sale of drugs and dairy and other food products, as may be designated by the proper credentials."

Mr. C. W. Garrison: Mr. Chairman, I understand that Mr. Jones is a subordinate officer and has been so designated as per telegram received by the officers of this Association.

President Barney: The chair will be obliged to hold that the committee who investigated this matter and have reported, and their report is unfavorable, that he has no right to have a seat in this meeting.

Mr. C. W. Garrison: I appeal from the chair and call for a vote to sustain it.

Mr. J. J. Farrell: Just to be fair with this gentleman I want to ask him if he is in charge of the enforcement of any law of that state.

Mr. Jones (Alabama): I am. Ask this gentleman that is speaking for me.

Mr. C. W. Garrison: As I see it, that does not come into the question.

President Barney: I think it does, and the chair will hold it does.

Mr. J. J. Farrell: I will ask the gentleman who is in charge of the enforcement of the laws in that state.

Mr. Jones (Alabama): Can I answer that?

President Barney: No, sir.

Mr. C. W. Garrison: Will you state your question, Mr. Farrell?

Mr. J. J. Farrell: In order to show the gentleman all the courtesy possible, I want to ask the gentleman from that state who is in charge of the enforcement of these laws. The gentleman is here, I mean Mr. Moore of Alabama.

Mr. Y. M. Moore: Mr. Chairman, the enforcement of the food and drug work of Alabama is vested in a Pure Food Bureau. There is no other enforcement of the food and drug laws except that delegated in the law, establishing this Pure Food Bureau. Any other work that is done is of an educational nature and has no power under the statute of enforcement.

Mr. J. J. Farrell: Now, Mr. Chairman, I move the adoption of the Credentials Committee report.

Motion seconded.

President Barney: It was been moved and seconded that

the Credentials Committee report be adopted. Is there anything to be said upon the question? If not, all in favor of the motion say "aye"; contrary, "no." It is a vote and the report is adopted.

Mr. J. J. Farrell: Now, Mr. Chairman, I move that that resolution be laid on the table, as it had no business in being accepted in the first place.

Mr. B. L. Purcell: I second the motion.

President Barney: It has been moved and seconded that the resolution of Mr. Jones be laid on the table. Are there any remarks?

Mr. Harry L. Eskew: I rise to a point of order on that gentleman's motion, when he goes so far as to say that it had no right to be accepted. I think that is a prerogative that any one has.

Mr. J. J. Farrell: Mr. Chairman, I still rise to a point of order that the motion is not debatable.

President Barney: All those in favor of the motion say "aye"; contrary, "no." It is a vote.

Mr. George L. Flanders: That comprises the report of the committee on all the resolutions that were introduced in this body and referred by this body to the Committee on Resolutions.

Mr. G. G. Frary: I have a resolution that I would like to present to the convention for consideration.

Secretary John B. Newman read the resolution, which is as follows:

"Whereas, Gross misrepresentations and misinformation as to conditions prevailing in the manufacture and sale of food, and great injustice to manufacturers of pure, wholesome food, and to members of this Association and others engaged in the work of enforcing food, drug and dairy laws, resulting from sensational, misleading and often untruthful articles appearing from time to time in newspapers and magazines, therefore be it

"Resolved, That this Association of American Dairy, Food and Drug Officials severely condemn such newspaper and magazine articles as actually harmful to both honest manufacturers and the consumer, and that we use our best efforts to discredit and abolish such articles."

Mr. Frank A. Jackson: I move the adoption of the resolution.

Motion seconded.

President Barney: You have heard this resolution—what is your pleasure?

Mr. George L. Flanders: I rise to a point of order, if that is a motion to adopt the resolution. It is not in proper order, and I would offer a motion that the rules be suspended and that it be referred to the Resolutions Committee for the purpose of considering it.

Mr. Frank A. Jackson: I second the motion.

Mr. B. P. Purcell: I am sure that there is no discourtesy intended to the Resolutions Committee, and I want to make a motion as a substitute that the rules be suspended and the resolution taken up for immediate consideration, without reference to the resolutions committee.

Mr. R. E. Rose: I second that motion.

The last motion was seconded and carried.

Mr. Frank A. Jackson: I move the adoption of the resolution.

Mr. R. E. Rose: I would like to have the last part of the resolution read again for the information of the body. Never mind the preamble.

Mr. George L. Flanders: In order to get the question before the house, I second the motion, and then it will be properly before the house.

President Barney: It has been moved and seconded that the resolution be read again. All those in favor say "aye"; contrary, "no." It is carried.

Secretary Newman (reading):

"Resolved, That the Association of American Dairy, Food and Drug Officials severely condemn such newspaper and magazine articles as actually harmful to both honest manufacturers and the consumer and that we use our best efforts to discredit such articles."

Mr. R. E. Rose: Now, Mr. Chairman, I have no objection in the world that this Association discredit those articles but what are you going to do about it. I think it is altogether unnecessary. It is well known that food officials discredit these articles to a certain degree, these slanderous articles, but if you do not provide means by which you can recommend some action to be taken to suppress them, a general advertising law, a model of which was given by Mr. Flanders, I say it is absolutely wasting our breath. We all discredit them but I do not think it would be wise to say so. I do not object to it, but I would like to see added to it

"that the commissioners of the various states take the necessary steps to prevent such false advertising and scurrilous articles and bring it under the libel laws."

Mr. G. G. Frary: I will say I wrote this resolution hurriedly and I would be glad to have Dr. Rose introduce an amendment and improve it, because it can be greatly improved.

When Miss Johnson spoke this morning in that splendid address she gave, I felt that she referred, in fact she actually said, that while we probably did not as officials approve of those articles yet we have not done enough, possibly nothing, to counteract them, and consequently the people who read such articles do not know that we are not in favor of them.

We do discredit them, as Dr. Rose, says, but we do so personally, each one of us, and without a doubt we have no sympathy for such notoriety or publicity, and for such absolutely unwarranted and disreputable notoriety as this Association got in the newspapers last night. The good things are not mentioned and a great deal is made of nothing, but it seems to me that it might not do any harm for the Association to say that it does not approve of such articles and it will get somewhere, and those of us who have sanitary laws, or in any other way in which it can be gotten at through the law, or by any other means, will certainly be willing to do all we can to enforce it.

Mr. R. E. Rose: I do not want to occupy the floor too often, but there ought to be some practical reason for the resolution and there ought to be something for us to go by, and if this Association should recommend to the national or various states to enact the necessary laws to prevent these scandalous, unfair advertisements and articles we would have something to go to our states with, but so far as the moral effect is concerned, I have never yet found that that class of cattle was affected by the moral sentiment of associations of this sort.

Mr. J. J. Farrell: Is there a motion before the house?

President Barney: Yes.

Mr. J. J. Farrell: Before that motion is put I would like to ask the chair to have read a similar resolution for the committee to act upon which may probably cover both. - I think that Mr. Frary will probably be satisfied with the wording of the second one.

President Barney: There is a motion before the house, Mr. Farrell, and I will put that first.

Mr. B. L. Purcell: I rise to a point of order. There is a substitute on your desk as I understand it now.

President Barney: It is not a substitute.

Secretary John B. Newman: If Mr. Farrell will move to substitute his resolution for this, we will get it before the house.

President Barney: The secretary will read the resolution.

"Whereas, This Association has never authorized any publication as its representative, nor issued or authorized any printed matter except copies of its proceedings, and

"Whereas, Such authorization of a representative nature from this Association has been claimed for commercial advantage by at least one publication; and

"Whereas, Such claims have been false and prejudicial to the interests both of this organization and also of the public; and

"Whereas, Granting of any official recognition to any trade paper and especially to one interested largely in the advertising of food or drug products, might at any time subject this Association and its members to grave misrepresentations, both before the trade and public; be it

"Resolved, That this Association condemns as false and fraudulent any claims by any trade or other publication to any authority as received from or representative of it; and further denounces such claims on the ground that they are put forth apparently for the furtherance of some trade interest."

Mr. J. J. Farrell: I move the adoption of the resolution.

Mr. R. E. Rose: I second the motion.

Mr. J. J. Frary: I do not think that resolution covers just the ground that my resolution covers, and I would like to move that these two resolutions be referred to the Resolutions Committee for an adjustment and recommendation of the resolution. Both of these matters could be combined into one resolution, or they could be presented as two separate resolutions, but it does not seem to me this covers what I intended my resolution should cover.

I think this resolution is good and should be adopted, but I also think the principle embodied in my resolution should be adopted.

President Barney: I think, Mr. Frary, that there is a

question before the house so I will have to take a vote on that first.

Mr. James W. Helme: A motion to refer to the committee is always in order.

Mr. G. G. Frary: Mr. President, I move you that these resolutions be referred to the Resolutions Committee for their consideration and report.

Mr. R. E. Rose: I second the motion.

President Barney: It has been moved and seconded that these resolutions be referred to the Resolutions Committee for recommendation and report. As many as are in favor of the motion say "aye"; contrary, "no." It is carried.

While the committee is out, I think we will take up the next place of meeting.

Mr. F. H. Fricke: Before we proceed to that order of business, I would like to make a suggestion that the secretary hereafter, before the meeting of our next convention, instruct all members to be sure to present proper credentials to be examined by the Credentials Committee, in order that we may not have a repetition of some of these cases that we have had here. I happen to be a member of the Credentials Committee, and I know some of the cases that came before us today.

Secretary John B. Newman: Mr. Fricke, I am heartily in favor of your suggestion, but the constitution provides for it and I do not see why they come here without having the proper credentials.

Mr. F. H. Fricke: It is merely a suggestion to impress upon them at this time that hereafter credentials will have to be presented. I make this suggestion because this is my fourth convention and never have I been asked for a paper.

Secretary John B. Newman: The constitution provides for it.

Mr. A. M. G. Soule: As another member of the Credentials Committee, I heartily agree with Mr. Fricke's suggestion, and I think that if every member, and particularly the members which have been in question, would have been supplied with the proper credentials that this little ripple which has been caused at this convention might not have occurred. I do not think that we want to do anything to disturb the harmony and the co-operation of the states, and of this Association in assembly, and I think that even the slight ripple, as I have referred to it before, is to be regretted, and I sincerely support Mr. Fricke in his suggestion, and I hope that it may be recommended, and I would also suggest that the secretary in sending the notices make proper mention that the delegates should bring proper credentials.

Mr. Frank A. Jackson: As chairman of the Credentials Committee, I can heartily support the remarks of Mr. Fricke and Mr. Soule.

Mr. Benj. L. Purcell: I am the duly constituted food authority in my state. Must I bring my commission with me?

Mr. R. E. Rose: No, it is not necessary.

Mr. George L. Flanders: May I call your attention to the fact that there are certain conditions precedent to a man sitting here, if he is not a commissioner. First, that he is duly designated by the commissioner under whom he is a subordinate officer. Not only that he is a subordinate officer, but that he is a subordinate officer enforcing the food and drug law. He might be an officer enforcing the veterinary law, or a law relative to some other substance, and under our constitution if he is not enforcing the food and drug law he cannot be here and attend this body.

Mr. J. J. Farrell: Just a word to close this up. We are living up to the by-laws and constitution. Why should we hear anybody here who is not entitled to be heard? We went by the by-laws and rules of this Association and we closed those people out who have no right here. There is no ripple about that. It is just a question of right.

Mr. Harry L. Eskew: It has been referred to as a ripple and I think that is a very modest way to put it. It seems to me that Mr. Jones had no right to be here. That is all right, but that should have been taken care of before the beginning of the meeting. If he had proper credentials and if the Credentials Committee had gotten it in time, he would have been either qualified or disqualified at the beginning of the meeting and then we would not have these things occurring at this time.

Mr. F. H. Fricke: How is the Credentials Committee to know what the constitution of this organization says if our officers opened the meeting under a constitution that was outlawed and did not know that another one was enacted in 1912?

Secretary John B. Newman: Mr. Fricke, I am glad you raised that point. That probably hits me more than anybody else and I will have a word to say about it. I am not the

old secretary, I may be the present old secretary. We brought out this row on purpose. We had a meeting of the Executive Committee before the convention opened, and I purposely incorporated in that report the old by-laws and constitution. It was not necessary to read it. There was a dispute as to whether the articles read at Seattle had been adopted or not. There were people sitting in the room that were there and nobody was sure about it. The previous secretary had not sent me a copy of the proceedings, printed or otherwise, of that meeting, and I could not assume that they were adopted, and I said that we will read them in there and we will soon find out after they are read, and we found it out.

It is not a case of not knowing what we were doing but we brought it out very rapidly. We are very grateful to the people that have been able to show us a copy that we have been able to accept.

The point that I want to bring out is that if the people who aspire to come here do not care to read the constitution and know whether they should have it or not, I think it is child's play for a secretary to go around and prompt them. They are not children, and I do not like to stand here and be criticized because I cannot round these men up. You men are all as old as I am and you certainly understand what is required of you.

Mr. George L. Flanders: If a motion is in order, I will make a motion. I move you that the secretary be instructed to have two hundred copies of the constitution and by-laws printed before the next meeting and send a copy to each state department.

Mr. R. E. Rose: I second the motion.

President Barney: You have heard the motion and second. Is there anything to be said upon the question. If not all those in favor please say "aye"; contrary, "no." It is carried.

Mr. B. L. Purcell: It has been suggested to me, and the suggestion seemed such a good one, that I want to make a motion that the secretary be directed to have a uniform credential blank struck off and send it with that copy of the constitution to the commissioners, one of those blanks to be used in certifying any one else than himself as a delegate to the next annual convention of this Association.

The motion was seconded by Mr. Soule and carried.

Mr. F. H. Fricke: I make a motion that we take a recess until five o'clock.

The motion was seconded and carried and the meeting adjourned till five o'clock.

NINTH SESSION, THURSDAY EVENING, AUGUST 10, 1916.

President Barney: We will now proceed with the closing session of the convention. Are there any resolutions to be presented?

Mr. G. L. Flanders: I desire to present the following resolution, on behalf of the committee:

"Whereas, It is estimated that the annual production of skim milk in this country is about thirty billion pounds; and

"Whereas, At the present time this product is largely employed in the feeding of calves, pigs, and chickens, and only to a limited extent in the feeding of human beings:

"Resolved, That this Association hereby expresses its recognition of skim milk as a valuable, nutritious and easily digested human food, and hereby approves the amendment or repeal of such laws as interfere with the proper sale of this valuable commodity."

President Barney: Are there any further resolutions?

Secretary John B. Newman: The following resolution has been handed in:

"To the Honorable the Members of the American Association of Dairy, Food and Drug Officials:

"The undersigned representatives of the trade desire to thank you for the opportunity of registering as being in attendance at the meeting at Detroit, Michigan, August 7-11, 1916, heartily commending the idea, and respectfully requesting that you continue this courtesy at future Association meetings.

(Signed)

"American Mfg. Assn. of Products from Corn, W. P. Cutler.

"American Feed Mfrs.' Assn., L. F. Brown, Secy.

"Thomas Canning Co., F. L. Channon.

"Sprague Warner & Co., Jay D. Miller.

"Jaques Mfg. Co., George P. McCabe.

"B. Heller & Co., George Lloyd.

"Swift & Co., C. J. Tressler.

"Sears, Roebuck & Co., A. V. H. Moury.

"National Confectioners' Assn., Frank Hickey.

"H. J. Heinz & Co., George F. Mason, L. S. Dow.

"Armour & Co., W. C. Kirk, H. D. Harris.

"Calumet Baking Powder Co., T. J. Bryan.

"The Postum Cereal Co., Ltd., F. D. Ernst.

"Scherer-Gillett Co., W. G. Scherer."

President Barney: Any further resolutions?

Dr. S. J. Crumrine: Mr. President, the convention was treated by hearing one of the great addresses by one of the world's greatest men, Prof. McCollum. I think it would be very fitting

for this Association to express its thanks through its regular organization, through its officers or its secretary. Perhaps that expression should be sent to the University of Wisconsin of which he is the president, expressing our thanks and our great appreciation for having Prof. McCollum address us. I move that it be so ordered.

Mr. Frank A. Jackson: I second the motion.

President Barney: You have heard Dr. Crumrine's resolution and the second by Mr. Jackson. All in favor please rise.

(The motion was carried by a rising vote.)

President Barney: I am going to ask Dr. Crumrine to just say a word in explanation of the amendment to the constitution. I think you should know about it. It is a sort of a report by the Executive Committee.

Dr. S. J. Crumrine: It appears that the Association and the Executive Committee, as well, judging from the action that they took at Berkeley a year ago, that they were under a misapprehension as to the standing of the Committee on Standards and Definitions, and evidently the Association itself had the notion that this was a committee of this Association. That is, that they were permitted to appoint members from this Association to confer with others, but understand that this is not the case. This committee is an independent committee appointed by the Secretary of Agriculture. It is true it has invited this Association to name certain members, but the term of office of



GUY G. FRARY.

that committee is now at the pleasure of the Secretary of Agriculture, and we have nothing to say about it.

With that explanation on behalf of the Executive Committee, I move that the proposed amendment be laid upon the table.

Mr. R. E. Rose: I second the motion.

President Barney: You have heard the motion and the second. Is there anything to be said upon the question? If not, all those in favor of the motion will please say "aye"; contrary, "no." It is a vote.

President Barney: I believe, gentlemen, we are ready to take up the question of the selection of the place for our next meeting.

After a spirited contest, participated in by Salt Lake City, St. Louis, and Deadwood, S. D., the latter city was chosen by ballot for the 1917 convention.

We will now hear from the Chairman of the Resolutions Committee on the balance of the resolutions.

Mr. George L. Flanders: The Resolutions Committee has dwindled somewhat, but there are two of the five here and we report this resolution for the favorable consideration of the convention, if such a report can be made.

Three out of five reported on the other ones, but only two on this one:

Whereas, It is estimated that the annual production of skim milk in this country is about 30 billion pounds, and,

Whereas, At the present time this product is largely employed in the feeding of calves, pigs and chickens, and only to a limited extent in the feeding of human beings;

Resolved, That this Association hereby expresses its recog-

dition of skim milk as a valuable, nutritious and easily digested human food, and hereby approves the amendment or repeal of such laws as interfere with the proper sale of this valuable commodity.

Reported favorably by a minority of the Committee, but all of the committee that were here after it was introduced.

President Barney: What will you do with this resolution?

Mr. R. E. Rose: I move its adoption.

Mr. G. G. Frary: I second the motion.

President Barney: It has been moved and seconded that the resolution be adopted. All in favor of the motion say aye; contrary no. It is a vote.

Mr. George L. Flanders: On the two resolutions referred back to the Committee, separate action was taken, and in the time that we had it was thought impossible to combine the two and bring them out as a well balanced resolution.

The first resolution was amended a little in the last part of it and reads as follows:

"Whereas, Gross misrepresentations and misinformation as to conditions prevailing in the manufacture and sale of food, and great injustice to manufacturers of pure, wholesome food, and to members of this Association and others engaged in the work of enforcing food, drug and dairy laws, resulting from sensational, misleading and often untruthful articles appearing from time to time in newspapers and magazines, therefore, be it

Resolved, That this Association of American Dairy, Food and Drug Officials severely condemn such newspaper and magazine articles as actually harmful to both honest manufacturers and the consumer, and that we caution the reading public against relying upon or placing confidence in such articles."

President Barney: What will you do with this resolution?

Mr. G. G. Frary: I move its adoption.

Mr. Frank A. Jackson: I second the motion.

President Barney: You have heard the motion and the second; is there anything to be said upon the question? If not, all those in favor of the motion signify by saying aye; contrary no. It is a vote.

Mr. Geo. L. Flanders: As to the other resolution it reads as follows:

"Whereas, This Association has never authorized any publication as its representative, nor issued or authorized any printed matter except copies of its proceedings, and whereas such authorization of a representative nature from this Association has been claimed for commercial advantage by at least one publication, and

"Whereas, Such claims have been false and prejudicial to the interests both of this organization and also of the public, and

"Whereas, The granting of any official recognition to any trade paper and especially to one interested largely in the advertising of food or drug products might at any time subject this Association and its members to grave misrepresentation both before the trade and the public;

"Resolved, That this Association condemns as false and fraudulent any claims by any trade or other publication to any authority as received from or representative of it; and further denounces such claims on the ground that they are put forth apparently for the furtherance of some trade interest."

Your Committee considered this resolution so far as it could in the time at its disposal and reports as follows:

"Owing to the lateness of the session, lack of evidence, and lack of time to investigate the same, we recommend that this resolution be laid upon the table."

President Barney: What shall we do with the Committee's report?

Mr. W. W. Randall: I move that the recommendation of the committee be adopted.

Motion seconded.

President Barney: It has been moved and seconded that the recommendation of the committee be adopted. All those in favor of the motion signify by saying aye. Contrary no. It is so ordered.

The next thing will be the election of officers. Whom will you have for your President for the ensuing year? Nominations are now in order.

Mr. Geo. J. Weigle: Mr. President, I wish to nominate for President of this Association Mr. J. J. Farrell of Minnesota. You know his qualifications and his ability and that is enough said.

The nomination was duly seconded.

Mr. Jas. W. Helme: I have noticed for some time coming to my office the reports of a Commissioner and they seem to be really live and up to date. I had never seen the Commissioner until I came here and then when I met him and investigated and found out that he was one of the largest dairymen in his state, I could understand why his communications and his official conduct appeared to be so good. The reason is that any man who associates with cows always gets some of the milk of human kindness in him, and that is what a dairy and food and drug commissioner wants a great many times. I have it myself sometimes.

We have got a President now who is a dairyman, and I assure you that dairymen, as you can see, make very good Presidents. I believe in the dairy cow; I believe that the man who associates with a dairy cow is a better man in every way. I associated with a dairy cow for a great many years and I speak from personal experience. I did not get married until I was forty years old and up to the time I got married the only female I ever kissed was a Jersey cow. For that reason I believe that we should just keep a dairyman in the chair. You need all the milk of human kindness to handle various people here, and consequently I take great pleasure in nominating Commissioner Mickle of Oregon.

Mr. F. H. Fricke: I desire to second that nomination.

President Barney: Are there any other nominations? If not, we will proceed to ballot. I will appoint Mr. Smith and Mr. Fricke as tellers. It is understood that each state casts three votes this time.

President Barney: In order to save a little time, I will call for nominations for 1st Vice-President.

Mr. J. P. Street: I have the honor to nominate for First Vice-President Frank A. Jackson of Rhode Island.

Mr. G. G. Frary: I second the nomination of Mr. Jackson.

President Barney: Are there any other nominations for First Vice-President?

Mr. Jones (Washington): I move that the Secretary be instructed to cast one ballot for Mr. Jackson as First Vice-President.

Motion seconded.

President Barney: All in favor of the motion will signify by saying aye; contrary no. It is a vote and the Secretary is instructed to cast one ballot for Mr. Jackson.

The Secretary stated that he had cast the ballot of the Association for Mr. Frank A. Jackson as First Vice-President of the Association for the ensuing year, and he was thereupon declared duly elected.

Secretary John B. Newman: The report of the tellers is that 24 votes were cast, 24 states voting, three times 24 is 72; ballots necessary to a choice, 37. J. J. Farrell received 42 votes and Mr. Mickle received 30.

Mr. J. D. Mickle: I move you that the vote for Mr. J. J. Farrell be made unanimous. Motion seconded.

President Barney: Gentlemen, you have heard the motion that the election of Mr. J. J. Farrell be made unanimous. All those in favor of the motion signify by saying aye; contrary no. The motion is carried and Mr. J. J. Farrell is declared elected President for the ensuing year.

We will now give an opportunity to Mr. Farrell and Mr. Jackson to express themselves.

REMARKS OF J. J. FARRELL.

Mr. President, Ladies and Gentlemen, and Fellow Members of the Association: The hour is rather late and I am not going to take up your time with any extended remarks on the election. Queer things happen and this is one of the peculiar things. They are happening every day of our lives. We know not what they may be. I came here to this convention to represent our state and to fulfill a duty that I owe my state as well as the country at large. I came here with the expressed intention of electing another man for this office, and you see what has happened. I am not to blame; you are to blame, the members of this Association, and I can assure you that for the ensuing year service is what I am going to render to you, as I am a great believer in service. I will also make the statement that any service I can render as President of this Association for the ensuing year will be done willingly and fairly to all the members of the Association, and men and women who are interested in this great work. As President of this Association for the ensuing year I can also assure you that my duties will be to look after the interests of your Association and you can rest assured that in no way will your interests through my presidency be commercialized in any way whatever. I sincerely thank you for this honor.

Mr. Frank A. Jackson: Mr. President and Ladies and Gentlemen: I have no extended remarks to make. I want to thank you all and I can assure you that I will put the same amount of energy into my efforts to further the work of this Association during the coming year as I did in the past year in my work as Treasurer.

Mr. J. D. Mickle: I did not come here as a candidate, but I will be back with you next year and will do my best to help Mr. Farrell make the next convention the best we ever held, and that will not be as a candidate either.

President Barney: Now, gentlemen, nominations are in order for Second Vice-President. Whom will you have for your Second Vice-President?

Secretary John B. Newman: Mr. President, I will nominate Dr. Oscar Dowling, of Louisiana, for Second Vice-President.

Mr. Frank A. Jackson: I second the nomination of Dr. Dowling.

President Barney: Are there any other nominations for Second Vice-President?

Mr. R. E. Rose: There being no other candidates, I move the Secretary be instructed to cast the unanimous ballot of the Association for Dr. Dowling of Louisiana for Second Vice-President.

The motion was seconded and carried and the Secretary stated that he had cast the ballot of the Association for Dr. Dowling as Second Vice-President of the Association for the ensuing year, he being thereupon declared duly elected.

President Barney: Gentlemen, who will you have for your Third Vice-President? Nominations are now in order for Third Vice-President.

Mr. Frank A. Jackson: I nominate Mr. Purcell of Virginia for Third Vice-President.

Mr. R. E. Rose: I second the nomination.

President Barney: Are there any further nominations?

Mr. G. G. Frary: I move the nominations be closed and the Secretary instructed to cast one ballot for Mr. Purcell.

The motion was seconded and carried and the Secretary stated that he had cast the ballot of the Association for Mr. B. L. Purcell as Third Vice-President of the Association for the ensuing year, whereupon the President declared him duly elected.

President Barney: Now, gentlemen, we have conferred the honor of First Vice-President on Mr. Frank A. Jackson, and we will have to have a successor to him. Whom will you have as a successor to Mr. Jackson as Treasurer?

Mr. Frank A. Jackson: Mr. President, I would like to nominate Mr. George J. Weigle of Wisconsin for Treasurer for the ensuing year. Nomination seconded by Dr. Ladd.

President Barney: Are there any other nominations?

Mr. Frank A. Jackson: I move that the nominations be closed and that the Secretary be empowered to cast a ballot for Mr. Weigle as Treasurer. The motion was duly seconded and carried and Secretary Newman stated that he had cast the ballot of the Association for Mr. Geo. J. Weigle of Wisconsin as Treasurer for the ensuing year, whereupon he was declared duly elected.

President Barney: Mr. Newman is the only unfortunate man in this crowd. He goes over I think for three years, so we will not have to elect his successor, but we will be obliged to elect a successor to Mr. Jas. Foust of Pennsylvania as a member of the Executive Committee.

The President appointed Mr. Foust on account of a vacancy.

Now whom will you have for your member of the Executive Committee?

Dr. S. J. Crumbine: I think it would be highly fitting to have as a member of the Executive Committee a Commissioner in the state where we are to meet next year, somebody who will be on the ground and see that plenty of wood is on hand—(deadwood)—to keep the fires burning. I therefore nominate our good friend, the Commissioner of South Dakota.

Mr. Frank A. Jackson: Mr. President, it gives me much pleasure to second the nomination.

President Barney: You have heard the nomination and second. Are there any other nominations?

Mr. Frank A. Jackson: I move nominations be closed and the Secretary be instructed to cast the ballot of the Association for Mr. G. G. Frary.

The motion was seconded and carried and the Secretary stated that he had cast the ballot of the Association for Mr. G. G. Frary as a member of the Executive Committee for the ensuing year, to fill the vacancy on that Committee, and he was thereupon declared duly elected.

President Barney: There is to be a member elected on the Committee on Co-operation. Whom will you have on that committee?

Mr. F. H. Fricke: I desire to place in nomination Mr. W. Scott Matthews of Illinois. He has rendered very valuable service the past year and I believe that the committee really needs him for another year.

Mr. Frank A. Jackson: I second that nomination.

Mr. J. J. Farrell: I move the nominations be closed and that the Secretary be instructed to cast one ballot for Mr. Matthews as a member of the Committee on Co-operation.

Motion seconded and carried and the Secretary stated that he had cast the ballot for Mr. W. Scott Matthews of Illinois as a member of the Committee on Co-operation for the ensuing year, the President thereupon declaring him duly elected.

President Barney: Is there any unfinished business to be brought before the association? If there is nothing further to come before this convention, I desire to thank the members for the kind treatment I received at your hands. Now, I think a motion to adjourn will be in order.

Mr. Frank A. Jackson: I move you, Mr. President, that we adjourn.

The motion was seconded and the meeting adjourned sine die.

PROPOSED UNIFORM STATE FOOD INSPECTION AND SANITATION LAW.

In the interest of a proposed uniform state food inspection and sanitation law, members of the Legislative Committee of the American Specialty Manufacturers' Association and their counsel were present at the convention and offered the bill as drawn for consideration.

The Legislative Committee of the A. S. M. A. is made up of the following: Walter H. Lipe, chairman, of the Beech-nut Packing Company; J. E. Linihan of the United Cereal Mills, Ltd.; C. T. Lee of the Kellogg Toasted Corn Flake Company; S. W. Eckman of A. Mendleson's Sons; A. C. Monagle of the Franco-American Food Company; G. A. Beardsley of J. W. Beardsley's Sons; and Charles Wesley Dunne, counsel.

Strong representations for the bill were urged in a report of this committee to the American Specialty Manufacturers' Association, and the report in pamphlet form was furnished to the Dairy, Food and Drug Commissioners. It sums up recent legislation on sanitary questions and municipal regulations for similar purposes, showing that the public is being awakened thoroughly to the need of such statutes.

Enforced food sanitation is in the interest of the food industry and of every manufacturer therein. General food sanitation creates confidence in the consumer. The merited confidence of the public in foods commercially produced is beneficial, beyond estimate, to the industry. Discovered unsanitary conditions of manufacture becloud the good name of, undermine the confidence in, and injure the entire industry. Finally, proper food sanitation leads to greater conservation and utilization of the available food supplies, the reduction of waste to a minimum. From a purely selfish standpoint, therefore, food sanitation is a good business policy for the manufacturer. It builds up the most important asset of a commercial house,—its good will. We believe, therefore, that there can be no better a friend of the food industry, and no greater a promoter of its lasting prosperity, than effective and equitable food sanitation laws. The public welfare of such laws is not to be estimated over their economic value.

PROPOSED UNIFORM STATE LAW.

AN ACT

Providing for clean, sanitary, and healthful food establishments, and for other purposes.

Section 1. UNCLEAN, UNSANITARY, AND UNHEALTHFUL ESTABLISHMENTS AND CONDITIONS PROHIBITED:—That it shall be unlawful for any person to manufacture, prepare, pack, can, bottle, keep, store, handle, serve, or distribute, in any manner, food, for the purpose of sale, in an unclean, unsanitary, or unhealthful establishment, or, under unclean, unsanitary, or unhealthful conditions, and except pursuant, in all ways, to the provisions of this Act.

Section 2. CLEAN, SANITARY, AND HEALTHFUL ESTABLISHMENTS AND CONDITIONS REQUIRED:—That every establishment, subject to the provisions of this Act, shall be constructed, maintained, and operated with strict regard for the health of the employees and for the purity and wholesomeness of the food therein produced, kept, stored, handled, served, or distributed, so far as may be reasonable and necessary in the public interest and consistent with the character of the establishment, pursuant to the following general requirements, viz.:—

(a) The entire establishment and its immediate appertaining premises, including the fixtures and furnishings, the machinery, apparatus, implements, utensils, receptacles, vehicles, and other devices used in the production, keeping, storing, handling, serving, or distributing of the food, or of the materials used in the food, shall be constructed, maintained, and operated in a clean, sanitary and healthful manner.

(b) The food, and the materials used in the food, shall be protected from any foreign and injurious contamination which may render them unfit for human consumption.

(c) The clothing, habits, and conduct of the employees shall be conducive to and promote cleanliness, sanitation and healthfulness.

(d) There shall be proper, suitable, and adequate light, ventilation, drainage, and plumbing.

(e) There shall be proper, suitable, and adequate toilets and lavatories, constructed, maintained, and operated in a clean, sanitary, and healthful manner.

Section 3. EMPLOYEES MUST BE FREE FROM CONTAGIOUS AND INFECTIOUS DISEASE:—That it shall be unlawful for any employer to require, permit, or suffer any person affected with any contagious, infectious, or other disease or physical ailment which may render such employment detrimental to the public interest, to work, and it shall be unlawful for any person, so affected, to work, in any establishment subject to the provisions of this Act,—pursuant to the provisions of Section 4.

Section 4. PHYSICAL EXAMINATION OF EMPLOYEES:—That, in order to effect the provisions of Section 3, the State (Board of Health) may require any person proposing to work, or working, in an establishment subject to the provisions of this Act, to undergo a physical examination, for the purpose of ascertaining whether such person is affected with any contagious, infectious or other disease or physical ailment, which may render the employment detrimental to the public interest. The examination shall be made at the time and pursuant to the conditions duly defined by the State (Board of Health). No person who refuses to submit to such examination shall work or be required, permitted, or suffered to work in any such establishment.

Section 5. ENFORCEMENT:—That the State (Board of Health) shall be charged with the duty of enforcing the provisions of this Act.

Section 6.—INSPECTIONS:—That the State (Board of Health), through its duly authorized officers, inspectors, agents, or other assistants, shall be permitted, at all reasonable times, to inspect any establishment, or part thereof, subject to the provisions of this Act, together with its operation. Any person refusing or interfering with such inspection shall, upon conviction, be punished as provided in Section 11.

Section 7. PRELIMINARY NOTICE, ORDER, HEARING:—That if, as a result of an inspection provided for in Section 6, it shall appear that any establishment is being maintained or operated in violation of any of the provisions of this Act, the State (Board of Health) shall cause written notice thereof to be served upon the person violating said provisions, together with an order commanding an abatement of such violation and a compliance with this Act within a reasonable period of time stated in the order. Any person upon whom such notice and order is served shall be given an opportunity to be heard and to show cause why such order should be vacated or amended, under such rules and regulations as may be duly prescribed. If, as a result of such hearing, it shall appear that the provisions of this Act have not been violated, then the State (Board of Health) shall immediately vacate said order, without prejudice. If, however, after such hearing, it shall still appear that the said provisions have been in any manner violated, and, upon a failure to comply with said order, in its original or amended form, within the reasonable time therein stated, then the State (Board of Health) shall, at once, certify the facts to the proper prosecuting attorney.

Section 8. PROSECUTIONS:—That it shall be the duty of each prosecuting attorney to whom the State (Board of Health) shall report a violation of any of the provisions of this Act to cause appropriate proceedings to be commenced and prosecuted in the proper courts, without delay, for the enforcement of the penalties herein provided.

Section 9. REGULATIONS:—That the State (Board of Health) shall make uniform and necessary rules and regulations for carrying out the provisions of this Act.

Section 10. DEFINITIONS:—That the term "food," as used in this Act, shall include all articles used for food, drink, confectionery, or condiment by man or other animals, whether simple, mixed, or compound, and all substances and ingredients used in the preparation thereof. The term "establishment," as used herein, shall include all buildings, rooms, basements, cellars, lofts, or other premises, or part thereof, used, occupied, or maintained for the purpose of manufacturing, preparing, packing, canning, bottling, keeping, storing, handling, serving, or distributing, in any manner, food, for sale. The term "person," as used herein, shall include a partnership, association, company, or corporation as well as a natural person.

Section 11. PENALTY:—That any person who shall violate any of the provisions of this Act shall be guilty of a misdemeanor, and, upon conviction, for the first offense, shall be punished by a fine of not exceeding _____ dollars, and, upon conviction, for the second and each subsequent offense, shall be punished by a fine of not exceeding _____ dollars.

Section 12. DATE OF EFFECT:—This Act shall go into full force and effect on and after _____

Section 13. REPEAL:—That all Acts and parts of Acts in conflict with this Act are hereby repealed.

Official Proceedings

Section A—Association of State Food and Dairy Executives

President—F. H. Stadtmueller, Connecticut.

Vice-President—S. C. Dinsmore, Nevada.

Secretary—Jas. W. Helme, Michigan.

Treasurer—George J. Weigle, Wisconsin.

Executive Committee—E. F. Ladd, North Dakota;
G. G. Frary, South Dakota; A. M. G. Soule, Maine.

FIRST SESSION

MONDAY AFTERNOON, AUGUST 7TH, 1916.

PRESIDENT JACKSON: If you will come to order, gentlemen, we will commence the business of the afternoon for Section A, which is the section devoted to the work of the Executives. I see by the program the first order of business is an address by the President.

ANNUAL ADDRESS OF PRESIDENT FRANK A. JACKSON.

Gentlemen: I greatly appreciate the honor which came to me at Berkeley in my election as President of Section A. The thought has occurred to me many times during the winter months that this section had not been developed to its full efficiency as a power for good in our work in the protection of the public health. It seems to me that this section, with its meetings and discussions, is one of the most important phases of our convention, and I am going to tell you briefly my own idea of the sphere of activities in which we executives should display, if possible, greater activity and energy than heretofore.

To repeat: Section A, to my mind, is of the very greatest importance, being as it is a gathering of the executives of the entire country, or at least of the most active states. By the executives I mean the men who are charged with the duty not only of enforcing the law as it stands, but of modifying and construing it. In other words, with the direction of the protective activities of such departments.

Section A, therefore, should devote itself exclusively to problems of administration. It should not stray over into the field of the chemist, the manufacturer, or the analyst. Its discussions should be relative to such problems as continually confront every Commissioner; problems not alone of what to do, but of how to do it; not only with the objects to be achieved, but the best and surest ways to achieve those objects. This, and this alone, should be our chosen field of activities.

Growing out of this is the necessity for closer and more efficient co-operation between ourselves. Individually we can accomplish a great deal. Collectively we can accomplish vastly more. We should aim first toward closer co-operation with our fellow executives of the neighboring states. By keeping each other fully informed of developments, by voicing suspicions of products which come to us from sister states and by promptly furnishing information called for by a brother Commissioner we can greatly assist ourselves in our own work, our neighboring executives, and also accomplish much more for the protection of the manufacturers and the consuming public.

But our co-operation should not stop with our neighboring states. Since the establishment of the Bureau of Co-operative Food and Drug Control and the appointment of Dr. Abbott to the head of the Bureau, the Federal Government has come closer than ever before to the executives of the several states. I have frequently felt that the advantages of this Bureau were not fully appreciated by all members of this section. In my own experience, Dr. Abbott and his department have been of the very greatest assistance, not only in matters of theory, but in matters of actual fact.

We have drawn very fully upon this department for technical and chemical information and the same has always been cheerfully furnished. We have also been greatly assisted in the suppression of certain evils by evidence secured with the help of this agency.

In return we have endeavored to do all in our power to assist the Federal authorities in their correction of abuses in interstate commerce, in which we feel that we have achieved some measure of success. This co-operation with the Federal authorities has been so satisfactory in our case that I strongly urge the other executives who have not done so to make the fullest use of the opportunities which the Department of Agriculture gives us of effective co-operation with the United States.

There is another matter of great importance in which we should be interested, a matter very vitally concerning the producers of food products. I refer to uniformity of legislation. This matter was touched upon at Berkeley and some progress had been made during the past winter in several states toward bringing their laws into greater accord with the general practice. The protection of public health should not stop at state lines; the problems in one state are very rarely different from those in another.

Uniform laws not only assist the executive, but they save needless expense and annoyance to the producer. I do not wish to be understood as advocating the reduction of the high standards set by some states to a dead level of mediocrity. Rather, I feel that those states whose laws may not be as progressive and as much in accordance with modern theory as others should strive to raise their standards to the end that conditions in the whole country may be made not only more uniform but better.

We should not lose sight of the fact that there are two sides to our work, and that the best interests of the public food

supply demand protection equally for the man who produces and the man who consumes. Protection and conservation of our food supply demands constant advance in the science of production. It demands also equal justice toward the man who is doing his best to make an article of food out of material that would otherwise be lost, and to the man who consumes that food when placed upon the market.

The tendency, so prominent a few years ago, to protect the consumer even at the expense of working an injustice upon the producer is now, I think, a thing of the past. The more we can harmonize the interests of these two elements, the cheaper and better will our food products become and the more will our resources be conserved.

The attendance at our meetings is not nearly so large as it should be. The more states there are represented the better can our work be carried on and the greater advantage will these meetings be to all of us. I urge upon the convention and especially upon you executives the desirability of a central meeting place for this Association. We have met first upon one coast and then upon another, making long and expensive trips for many of the delegates. It would be much better, in my opinion, that a central city having the necessary advantages for each meeting should be chosen and that our meetings should be held there annually. In this event, I think that more states would be able to be represented to the greater advantage of all concerned.

Let us, then, while we are together, discuss those problems which especially interest us as administrators of this important branch of the law. Let us discuss our problems one with the other and gain the value of each other's experience. Let us resolve to co-operate closer, not only with our neighbor, but the Federal Government, to the end that our work may be more efficient and casier in accomplishment.

Let us use our influence with our legislators that a greater degree of uniformity may be secured, and that a product legal in Maine may be equally legal in California. Let us keep in mind that we are charged with the interests not only of the packer, but of the consumer, that our ultimate aim should be better protection and conservation of our food supply, and last, but not least, let us improve to the full our opportunities for forming very pleasant and lasting friendships with our fellow workers in the cause of public health.

President Jackson: The next report is from the Secretary and the Treasurer, and as they have no reports we will pass that. The first paper this afternoon is by Dr. C. L. Alsberg, Chief of the Bureau of Chemistry, Washington, D. C., on the subject of "Administration Problems and their Solution."

ADMINISTRATION PROBLEMS AND THEIR SOLUTION.

BY DR. CARL L. ALSBERG.

Mr. Chairman, Gentlemen: Much as I appreciate the honor of your invitation to address this meeting upon the subject of "Administration Problems and their Solution," it is with hesitation that I accepted, because my experience has only been with Federal conditions. I have, therefore, only indirect knowledge of the needs of the states. However, I will endeavor to give you the results of my experience and each one of you can then discount them as you may see fit.

The foundation, the basis of law enforcement in most states, rests both upon the Commissioner and the State College or Experiment Station.

There are, broadly speaking, two forms of organization; those in which the enforcement of the law is in some way connected with the College or Experiment Station and those in which it is quite independent.

Let us consider the former. Here again we have to consider two types of organization; those in which the Commissioner is an independent official, co-operating with the College, and those in which he is actually an officer of the College.

If he is an independent officer, he will be located either in the same town with the college or at a distance. If he is located at a distance, it is necessary for him to make ample provision for overcoming and minimizing this serious handicap of location. He must provide for frequent travel of the analysts for conferences and for attendance at hearings. Otherwise the analysts will not be informed upon economic and trade conditions; and their interpretation of analytical findings as well as their general recommendations may, therefore, be one-sided.

If, however, the Commissioner and the college are located in the same town conditions may, nevertheless, be unsatisfactory. This is, I think, usually due to the fact that the chemists at the college serve two masters, and sometimes three. They may have to do teaching and research as well as regulatory work. If they make their college work their main occupation, their regulatory work is neglected. If they give their best efforts to the regulatory work, their college work suffers. Sometimes the college regards the regulatory work largely as a means of augmenting its resources and requires such work to be done by the regular teaching staff, merely as a side issue. Then the Commissioner inevitably gets unsatisfactory results. Or the reverse condition prevails—the regulatory work be-

comes so great and important that it overshadows the legitimate college and station work. Teaching and research are neglected and the college or station fails, to a greater or less degree, in doing the didactic and constructive work for which it was founded. There is one simple way out of this dilemma. It is to separate the regulatory from the college work by having it done by two separate sets of men. There should be established in the college or station a separate chemical department which is not required to do any teaching or independent research, but which is expected to do regulatory work and such research as is necessary to meet the changing demands of law enforcement. It is very important that the regulatory chemist carry on research. The chemist who is debarred from so doing is apt soon to become a hack of little value. The research of the regulatory chemist should be in the field of his regulatory work. If the investigator's spirit is in him, he will find no dearth of problems in food and drug control chemistry. He will thus keep abreast of his science. The stimulus received by an official chemist located at a college or experiment station from contact with his teaching and research colleagues is of great value.

If such a separation is made, I believe it possible for the Commissioner to get satisfactory results without ruining the chemical department of the college or station so far as the proper functions of the college or station chemists are concerned. Indeed, such an arrangement would be advantageous to both. The regulatory chemist would be stimulated scientifically and kept in touch with the progress of his science by contact with his teaching and investigator colleague, while the teacher and investigator would gain contact with the practical applications of his science. If such a separation is not made, there is apt to be a lack of continuity in the regulatory chemical work. To the average academic chemist, regulatory work is less attractive than either teaching or research. It involves much routine and not rarely loss of freedom of choice of work. Consequently in a chemistry department charged with doing all three kinds of work, the older, more experienced men are tempted to turn over the less attractive regulatory work to the young inexperienced assistants who are often without special training in food, feed and drug analysis and who are apt to look forward to doing something else as soon as they are advanced. By the time they have acquired some experience in food and drug work, advancement comes and the regulatory work is turned over to a new set of young men. The academic chemist rarely looks forward to making regulatory chemistry his life work because he can not look for advancement along that path. If, however, the separation be carried through, as suggested, such an incentive would be created. Moreover, the country would acquire groups of experienced regulatory chemists who would train a considerable body of young men—one of our great needs today, as all of you know who have had vacancies to fill in your regulatory laboratories.

It must not be forgotten in this connection that regulatory work is not an unmixing blessing to a college or experiment station even when the regulatory work is conducted apart from the teaching and research. Regulatory work of necessity creates antagonism. This may impair the effectiveness of the demonstration work or teaching and it may tend to keep the college in politics. It may be that in some states not only will the regulatory work be given a separate status of its own in the college, but a separate regulatory institution will be established in the college town affiliated, with, but distinct from, the college or station. Thus many disadvantages might be eliminated without sacrificing wholly the immense advantage of keeping up contact between regulatory and research men.

Let us next consider those conditions in which the law enforcement is unconnected with any educational or agricultural institution. Other problems here confront the official in securing the necessary scientific work. Should he have a laboratory of his own or should he farm out the chemical work to commercial analysts? I am of the opinion that he should have his own chemists. The number of commercial chemists who are experienced food or drug analysts is very small in this country. It would not, as a rule, pay a commercial chemist to specialize. He can not every time he is confronted with an unusual difficulty give the time necessary to surmount it. State chemists, however, will soon acquire a large fund of experience and will be able to spend whatever time is necessary to make an unusual or especially difficult determination. They can do many things that can not be expected of a commercial chemist. They can be consulted more freely and can be on closer terms with the inspection force. They can be told all about a given sample and can thus make a more satisfactory analysis and give a more intelligent interpretation. They serve but one master. There will, of course, be occasions when the commercial expert will be called in, but this should be the exception, not the rule.

With reference to inspection work, I believe from personal observation that there is often too little co-operation between inspector and chemist. That there may possibly be a remote danger of collusion between inspector and analyst is, to my mind, no reason for rearing a barrier between them by such policies as not letting them work together and furnishing the sample to the analyst without a label or inspector's report. The analyst can not do his best on such meager information and the inspector will never learn what is worth collecting for analysis. Chemists and inspectors will sooner or later grow antagonistic to one another. I believe inspectors and chemists should at times travel together to make factory inspections and the like. The chemist must be familiar with conditions of production if he is to do his chemical work intelligently and if his technical advice is to be valuable. The laboratory man should have every bit of information that the inspector can get for him.

I am inclined to believe that it is not good administration to turn inspectors loose to collect anything that in any degree, however slight, arouses their suspicions. The result is to overburden the chemists with more work than they can perform. A few inspectors can keep many chemists busy. It is a terrible waste of time for the chemist to analyze many samples that lead to the discovery of no violations of law. It is most discouraging to have the samples pile up so that the chemist is completely snowed under. For this reason, if for no other, the collection of samples by the inspector should be carefully di-

rected and controlled. He should be instructed to collect specific types of carefully considered violations. He should be taught carefully to distinguish between trivial and substantial violations of law. He should be permitted only to collect enough samples to keep the chemists busy to capacity and no more. In that way it is possible to avoid citing dealers on cases many months, or even years old. It is unwise for the same reason to confine the collection of samples to limited periods of the year. Collections should be made steadily over the year. The number of samples an inspector collects should not be the measure of his efficiency, but rather how great a percentage of the samples collected show violations of law.

The inspector who is thus controlled, directed and limited with reference to the collection of samples, need not be idle. There is an immense amount of factory and general sanitary inspection work, not involving laboratory study which should be done and is now often neglected. Indeed, this work is often as important as the chemical work, often more so, since it deals with sanitary matters. The need for this work is so great that no inspector need be idle, however few the number of samples collected for analysis.

Just as I pointed out that in separating the regulatory work from the teaching and research in the colleges and stations, the regulatory chemist should not be barred from undertaking his own type of research, so in directing the inspector's work, the greatest care must be taken not to destroy his initiative. He should not be barred from collecting samples or from starting investigations on his own initiative. His value should be estimated not by the number of miscellaneous samples he collects, but by the number of new types of substantial violations of law he discovers. It is the promiscuous and routine collection of samples that should be controlled.

In short, it is my belief that there will be a great gain in the efficiency of our work if teaching and academic research be separated from official chemical work and regulatory research; if closer co-operation be brought about between chemist and inspector and if the inspection work is more carefully planned and supervised. If this can be brought about without sacrificing close contact between the official and the academic chemist, so much the better.

REMARKS OF DR. E. F. LADD.

Mr. Chairman and Gentlemen: I have not made any preparations for any remarks. In fact, I hardly expected to be here, and after the very instructive talk given by Dr. Alsberg, there is very little, in fact, to be said.

However, I agree with Dr. Alsberg in what he has said and especially so in connection with that phase of the work with regard to separating the work as far as possible of the chemist and the experiment station and the colleges; that is, separate departments. For that very reason, beginning July first of this year, I began the work of reorganizing the institution by dividing it into four divisions, the college work and experiment station for research done, the work of getting the information to the general public, and fourth the regulatory work, and our regulatory division is just on a par, on the same basis as the experiment station, with its director, the inspection division with its and the college with its director. In that way both are under the same plan.

I agree necessarily that the experiment station and regulatory chemist should do research, and I believe in my experience that the best good comes from using only chemists as inspectors. I employ none else for inspection work and when they are not out on inspection work they are in the laboratory assisting the chemist in making analysis, not on the samples that they have collected, but on work of research that is being carried on, because this year we are attempting to do a certain and particular line of work, how to study the stamp problem that will engage our attention in regulatory for the coming year. I may say for the present it is studying canned corn, certain phases of the problem, and next year we will try to correct certain possible flaws that have crept in in some directions.

I believe also in this field of work, which has been intimated or suggested by the President, that we need to go to our own state lines and co-operate with the adjoining states.

I know a few years ago in North Dakota, when I had certain problems that we were dealing with, we co-operated with the adjoining states of Wisconsin, South Dakota, Iowa and Michigan in some of the instances we met together at Madison, or St. Paul, and problems were taken up and discussed and we got each other's viewpoints, and that helped a great deal more than would have been possible to accomplish in any other way.

I think it was a mistake to discontinue meetings of that kind; they should be held and continued, including administration work and co-operation with the Federal authorities and for that district I may say that we can carry on our work more satisfactorily and in harmony with what is being done in the adjoining states.

I do not know that I have anything further to add at this time.

President Jackson: This is a question for the Food Executives. Dr. Crumrine, have you anything to say on the subject?

Dr. S. J. Crumrine: Mr. President, I think I have nothing to add except to say that I am in perfect accord with the remarks of Dr. Alsberg and I am in perfect accord with the last remark made by Dr. Ladd; and that is the idea of sectional conferences. Perhaps in co-operation with the Federal authorities, we might say it properly came under our scheme of co-operation, and yet I think we need to look to co-operation between the states as well as the state with the government. I think that would be a marked advance in our work, both as chemists and administrators. (Applause.)

President Jackson: I have just been informed that Dr. Barnard will not be here tomorrow and if Mr. Smith has not any objection we will take up Dr. Barnard's paper next. Have you any objection, Mr. Smith?

Mr. Smith: None whatever.

Mr. Geo. L. Flanders: I agree with some things said by Dr. Alsberg, but not all. I agree with considerable of what Dr. Ladd said, but not all. Dr. Ladd says the chemist should do investigational work. We have not got enough chemists in New

York to do the regular work in their own departments. All our chemists are under the Civil Service law and the comptroller will not allow a man that is assigned to do a certain class of work to work at something else. Those are two insuperable objections to follow that rule.

Another proposition that Dr. Alsberg raised that I object to and that is letting the chemist know all about every substance taken for analysis, but it is not for the reason at all that there might be some differences between them, the chemist and the inspector, but it is on account of the fact that when you go into court the attorney will ask him if he knows that this sample was the product of this concern, and in order to protect the chemist it is absolutely necessary that he has no knowledge of its origin.

I do not exactly understand what Dr. Alsberg means by the inspector. In our state our inspectors number from fifty to one hundred and fifty and I find we have to round them up. We have agents in charge of certain divisions. We have one agent in charge of a lot of agents in a certain division that at certain times brings those agents together, the supervising agents, and when we get those agents together we discuss questions involved. We find the supervising agent does not understand the question and it requires a clearinghouse of action to inform them correctly.

If Dr. Alsberg means by the inspector the supervising head of the clearing house imparts the information to them then I agree with him. If the chemist is advising this man, or he is supervising the man, then it may be all right for him to know what the chemist knows, and vice versa, and they may be working together in the same room; then that is all right, but if he means to allow each individual inspector to exercise his own initiative on the peculiar phases of the different matters that might come up, why, it would produce a chaotic condition.

Our work, I believe, illustrates this. Last year we examined 1,781 cases, or something like that number, and when we brought them before the Attorney General of the state for prosecution, 780 were rejected as not being proper cases for prosecution.

We have many questions that come up involving different subjects. Sometimes it is a question of what is a proper label and many and many a man himself puts out goods and he tries to interpret the law as to how they shall be labeled and yet he does not quite meet the requirements of the state.

Now, we have in the state of New York this method: If you have any doubt about the label, send it in and tell us what is in your product and we will tell you whether the label is a proper one or improper one; if it is the improper label, we will tell you about the label; there are two or three ways.

Beyond that, we have agents in the field going from manufacturer to manufacturer, and from wholesaler to wholesaler looking their goods over and looking their labels over and advising them whether they are labeling them properly, and then the agent will send in a report to us daily. His report generally reads, "so and so and, in my judgment, that is not a proper label," and it is constructive and simple. That is another work that is being attended to by our agents.

Of course, I can understand that there is a vast difference in the work in different localities. For instance, New York state has got ten million people, and business proportionately, while other states in the Union only have three-quarters of a million, and business proportionately. Ours is operated on a large scale and it seems to me that we can not take the matter up in a manner that will allow the individual agent or inspector to exercise his own individual initiative, but that he must himself be controlled; we must have a supervising center and we call that a clearing house of action, a clearing house of thought.

Dr. Carl L. Alsberg: I would be very much obliged to Mr. Flanders if he would inform me as to how you can employ one hundred and fifty to three hundred and fifty inspectors.

Mr. Geo. L. Flanders: Fifty to one hundred and fifty.

Dr. Carl L. Alsberg: We have in the Bureau of Chemistry forty-six inspectors. If they were all turned loose, in two weeks they would load up the chemists with enough samples to keep them busy for five years, and evidently, Mr. Flanders, the nature of the work your inspectors do must be quite different from what is done by our inspectors. We have not found it safe, or fair, or reasonable to permit our inspectors to give manufacturers advice with reference to labels for the simple reason that we can not be at all certain the inspectors would give two different manufacturers the same advice on the same product and very frequently they have not gotten the necessary knowledge, and very frequently when they have exceeded their authority in giving such advice it has led to some unfortunate situation, so our inspectors are not permitted to advise manufacturers with reference to labels. Of course, the department acts very fair in advising anybody in that respect, but whatever advising is done we find it better to be done by the Chief of the Bureau in Washington. I should very much like to know from Mr. Flanders just what your inspectors do.

Mr. Geo. L. Flanders: I was thinking of all branches of our work in all its different phases, the veterinary field and feeding stuff; the everlasting vile market, and all those products in the way of food products. I said it consisted of one hundred and fifty; sometimes we have more; sometimes we have less. We have particular men that do go around and advise, as I stated. They do not advise positively always, but they say to a man this label is incorrect for certain reasons, in my judgment, and then they make a satisfactory report on that label. The final decision is made at Albany. As a matter of fact, I make it myself. But that filters through to a final point so that we get uniformity in that kind of work. Even if at certain places we make a mistake our mistake tends toward uniformity. If we have made mistakes, the courts will set us right, but we are working toward uniformity.

Mr. Geo. J. Weigle: I believe that my state is getting Dr. Alsberg's idea, and another state I know. I believe that the chemist should go out with the inspector. I have nine food inspectors and I appoint the chemist as the man who is responsible. He takes charge of the entire analysis. I have four chemists in my laboratory. He goes out with the inspector as he has got to know the name of the sample in case of prosecution. I believe the closer you get to the chemist and the inspector, the better results you are going to have in your analy-

sis, the closer you get the chemist and the inspector together, the more satisfactory the results will be, the same as Dr. Alsberg says, and I fully agree with Dr. Alsberg. I think the state of Wisconsin followed his idea out to the letter.

Mr. Geo. G. Flanders: We not only can not send out our chemists, but we have difficulty when the trial comes on in the Supreme Court, in the different parts of the state to get our chemists to the courts if they want them. For instance, the same chemist might be wanted in three or four different places at once. For instance, we have a veterinary surgeon who examines all calves. They wanted this man in Hoosic Falls, Newburgh, and a couple of other places at the same time to testify. In this way our chemists would lose a great part of their time, to say nothing of the expense. They have got all they can do to take care of the chemical work. Besides, when you come to try a case, the chemist has got to be able to testify that he does not know where the sample comes from.

Dr. Carl L. Alsberg: Of course, this question of having several people or one person in several places at the same time is a difficulty that we have all got to meet. But we meet that to a certain extent in the Bureau of Chemistry by having our laboratories scattered around, by having him in the laboratory which is closest to the place where the court is tried. If a man is wanted in two places at once, we try to get the United States Attorneys to postpone one of the trials while the other is being tried, but we have minimized it by having the samples analyzed in the closest place to production, which, of course, means a great saving in expense. The coast chemist has followed the same tendency, and we are lucky in not having to go more than a few hundred miles. It was, of course, our chief difficulty in sending a man from Washington to Portland, Oregon, and then having to cool his heels in the hotel for three or four weeks waiting for the case to be called. That happens to us not infrequently.

I perhaps did not make myself clear as to what I meant in connection with inspection work. Dr. Ladd says that his chemist does the state food inspection work. We have some chemists that have been transferred from the chemistry branch service to the inspection branch service, usually because their health was such that they asked for a reassignment. They made very good inspectors, but I do not think it has been our experience that they made better inspectors than some men from other sources. When I speak of inspection work I do not mean inspection work in the sense of collecting samples. Our chemists do not—I do not recall any case where our chemists collect samples. Do you, Mr. Drury?

Mr. Drury: I do not.

Dr. Carl L. Alsberg: It is a question in making a factory inspection or investigating an industry of making up your minds what the abuses are, and how far you should go with it. Then we find it very advantageous to send out an inspector and a chemist and a bacteriologist, a microscopist, a botanist and an inspector. It is not so much for the purpose of collecting the samples; we do not employ our chemists that way.

Of course, your department has much wider scope than the Bureau of Chemistry, as you cover not only chemistry itself, but what the Bureau of Animal Industry does, and have other connections in addition, while I was thinking only of questions which affect foods and drugs and feeds, and my remarks should be limited to those products and exclude those important products which are subject to meat inspection, with which I have had no experience.

There is also one other point in that connection, and that is your statement that your inspector, instead of collecting the samples, puts in a report recommending the collection of the samples.

Mr. Geo. L. Flanders: That is satisfactory with us.

Dr. Carl L. Alsberg: I think for certain classes of work that is a very excellent idea. There are several reasons for that; it may be inadvisable to take up certain questions at a given time. You may feel morally certain that a certain class of products are in violation of the law, but you have not got the facts and you can not prove them. If you start something before you are ready you are in an embarrassed position. You do not want to drop it because somebody will criticize the department for it, and you are not ready to put it through the courts, because you are not in a position to put your best foot forward.

I know that plan which Mr. Flanders outlined has a great advantage as it helps you in controlling questions affecting the kinds of samples you are collecting. In the Bureau of Chemistry we have put a similar plan through there with reference to the Sherley amendment, as that bears on the food and drugs act, which applies to patent medicine. We can have in every laboratory and every district, having the work for medical experts, have a condition to tell whether that label is a fair label or a fraudulent label, so we have worked out a scheme by which the inspector does not collect the official sample, but if he comes across a patent medicine which he suspects as being in violation of the law, he buys a sample, sends it in for the consideration of the medical expert in Washington, the medical expert in Washington looks over the label. If it is such a label that it is suspicious and if he thinks it is a violation of the law, then he sends the sample to the inspector to collect, and to the chemist who has to do the analysis. What drugs to look for in making an analysis on this patent medicine, it is impossible to determine and a chemist can waste weeks and months in trying to find out a complete analysis without having the necessary information. There was a chemist who analyzed epileptic cure which contained bromides for strychnine. Now, nobody that knows anything about epilepsy would ever dream of finding bromides in there.

We send specific instructions to the analyst to test for these serious things that are or may be used for a particular remedy, are written for and anything else he may want.

Mr. Flanders' plan, I think, can be used to considerable advantage in directing the work. It is not so important to you gentlemen in the states as it is to us, because you have not got any interstate records in the matter. Sometimes you know the inspector collects a sample and it is a big job to trace that sample and get an interstate record. Then if the sample is not a violation of the law all that time has been wasted on the matter. But even then you have not the means of con-

trolling samples that we have it still is, I think, a pretty good plan, provided it does not tend to kill the inspector's initiative. Mr. W. Scott Matthews: I think this discussion is highly valuable for the purpose of exchanging ideas and experiences. I understand the laws and conditions are different in the different states, but as far as our experience in Illinois is concerned we have got much better results through our getting the chemist and the inspector closer together, and we find that the closer we can get the work of our chemists and inspectors together, and the better they understand each other's work, the better results we get.

That has been our experience in Illinois, so much so that as highly as I regard Mr. Flanders and, of course I do not know his local conditions, but, nevertheless, I must take issue with him on the proposition of keeping the inspectors and the chemists separated. Our experience has been that the very best results have been obtained where they work closest together and understand each other's work.

President Jackson: The afternoon is drifting away pretty rapidly and we have another paper that is quite important. I want to give every Commissioner a chance for a few words on this subject because we want to take up Dr. Barnard's paper, which is another very important paper, and have a full discussion of it also. Is there any other Commissioner that has a few words he would like to say on this subject? Dr. Alsberg, is there anything else you would like to say in conclusion?

Dr. Carl L. Alsberg: I think that is all.

President Jackson: If there is no further discussion the next topic will be Dr. Barnard's paper and our next meeting will be Thursday evening and I have arranged with Mr. Smith to present his paper at that time for discussion. The title of Dr. Barnard's paper is "Field Work and Its Control."

FIELD WORK AND ITS CONTROL.

BY DR. H. E. BARNARD, INDIANA.

Mr. Chairman and Gentlemen: In discussing this subject I can not bring to bear the wide experience of many food officials. Although I have been long at the work of food control, I began with small appropriations and for several years served as my own inspector, chemist, stenographer and attorney. It may be that that very experience in the field has, however, given me a better idea of the inspector's difficulties than I would otherwise have.

This is not the first time the subject has been discussed in our Association and yet so rapidly is the work of the food official changing that while my treatment of it may be quite different from those who have preceded me, yet I have no doubt that you will agree in part at least with my conclusions.

The food inspector used to be a sort of special detective, possessed of a highly developed nose for food fraud and at least supposed to be expert in chasing down vicious labels and soulless adulterators. As I look upon him the inspector today is working in a different field. He is the field agent of the department, the instrument through which the executive keeps in touch with the consumers on the one hand and the producers on the other.

Every official who has been long in the work has probably developed his own method of controlling the field man. My method works well, or rather I should say, I am satisfied with it. But what satisfies me would perhaps to you appear to be inefficient, and what you would demand of your inspectors might on the other hand impress me as being mechanical and burdened with technicalities. After all, efficiency in the field depends upon the inspector himself and not upon any method of controlling him. A good man will get results no matter how he works or how he is handled. A good man will be a failure wherever you put him and however you handle him.

For the sake of what we are pleased to term efficiency, certain things must be worked out in advance. Each inspector must have certain territory to cover and that territory is fixed by its population, the size of its cities and the ease with which the inspector can cover it. I have found that the best results from inspection work are obtained when the inspector knows his district so well that he can call every butcher, grocer and baker by his first name; that he can back him up against the corner and lay down the law to him in an intimate and yet effective manner as no stranger or mere officer of the law could hope to do. There are times when the inspector has to work with gum shoe methods, but the occasion for this sort of work is rare and happily is growing more rare each year.

After the inspector is established in his territory it is his duty to know it thoroughly and when he knows it I believe that the main office should let him alone, secure in the belief that the man on the spot, trained, trusted and intelligent, can handle the situations as they develop more effectively, more capably than when he is bound by strict rules of the executive office.

Every situation the inspector meets is unique because every man he meets is an individual different from every other man. It is not possible to lay down rules by which the inspector can use tact, judgment and discretion, and so long as efficiency depends upon the exercise of these functions the best way to handle the man in the field is to turn him loose and let him alone.

Certain things are essential, they are required by law. One of the most troublesome of these essentials is the matter of accounting. In my state, for instance, the inspectors in the field can not buy a sandwich without requiring the sandwich man to sign a receipt showing the expenditure of the nickel. I do not like the system. It may save the state money, but it certainly costs the state a lot of time. I believe the inspector should be required to itemize his expense account to show exactly what he does with the state's funds and then I believe that he should be trusted to render a correct account. If he can not be trusted to do this he can not be trusted to act as an inspector, and yet so crude and unthinking is the average state government that it has never occurred to the law makers that there is any other way to hold a man in strict

accounting except to require him to return separate vouchers for every item of expense.

The matter of daily reports is something which has given me much concern. For a long time I insisted upon a report showing work accomplished during the day and work projected for the next day. I have abolished the daily report. It has its good points, but unless the official wishes to give all of his time to keeping track of the individual work of the inspector the report goes into the file to be forgotten.

Personally I do not believe in so complex an organization, in the office or out of it, or of such a complete system of filing, indexing and cross-indexing that all of the work of the department is spent in mechanical routine affairs. At the present time it is enough for me to know that the inspectors are in their territories doing their regular work or special work to which they have been assigned.

I do require a monthly report card, showing in considerable detail how their time has been employed. I require, for instance, that the card show the number of hours spent in inspection work, in legal work, in conference with health officers, in travel and at the main office. The summaries at the end of each month are interesting, and they are helpful in showing the method of work of the different men. If a man is inclined to spend too much time in conferences and too little in inspection work the monthly report card makes that fact known to me. If the time spent in travel seems excessive, it may point to the necessity for a readjustment of territory. This monthly report card also shows the number of samples collected each day, a matter which is of interest to the chemist.

The inspector in the field is loaded down with blanks, inspection blanks, condemnation blanks, special blanks, score cards in a dozen different forms. These blanks were designed to be used because they seemed to be necessary to keep the department advised of conditions in the field. They are necessary, but just how necessary some of them are I am not at the present time wholly certain. They give us figures by which we can determine improvement in sanitary conditions. They give us facts which guide us in the building of new plans. They give us the touch with the men in business which we need. They also give the filing clerk a great deal of trouble and they crowd our files until we don't know what to do with the cards. Every time I devise a new blank or draft a new score card I assume an extra burden myself, load up my office force and give the inspector an instrument which, although designed to help him, may in the long run prove a handicap. I used to think that a multiplicity of blanks and special forms meant efficiency, and I was once so foolish as to judge of the value of my fellow Commissioner's work by the number and style of his filing cases. I am not making that mistake today, for if there is anything more depressing to the inspector and to the executive than efficiency run to seed I don't know what it is.

You have by this time no doubt got my idea of field work. To boil it down, it is all in the man, and when it comes to keeping in touch with him, that is very largely a personal matter to be governed by the size of the state and the character of the law which is enforced.

But whatever the system which seems necessary, be sure that it does not dehumanize the individuals who work under it, for just as soon as the inspector loses his human attributes and becomes an automaton who slides silently around filling out score cards you have lost that which you sought to gain, the essential, intimate touch with the people with whom you serve.

Mr. A. M. G. Soule: Mr. President and Gentlemen of the Convention: The very fact that Dr. Barnard has enumerated in his opening remarks his qualifications and his experience by serving as an inspector and chemist, and also as stenographer and attorney, makes the fact of my appearing here to criticize and discuss his paper almost presumptuous. My experience in handling field work in my state covers practically three years and any discussion I may make of his paper will be my experience, my personal experience as applied to the inspectors that I am handling in my state, rather than a criticism of his paper as presented to the Association. It would also be well to have it understood by the Association that the inspectors who are under my charge with the collection of fertilizer and feed samples, and also samples of insecticides as well as food and drug samples. I agree with Dr. Barnard that much depends on the man; the personal equation of the inspector's ability is a large idea in the field work, but I do not agree with Dr. Barnard that the best results are obtained by assigning an inspector to a special territory. I find that while I dislike that very well used and well worn adage that familiarity breeds contempt, I find unfortunately it has been my experience that dealers, while they only might be technical violators, would not pay the attention to the inspector if they had the full advantage of his acquaintance. And for the first year in the administration of the food laws that was my policy to assign to each inspector a definite territory. Since then I have discontinued that practice. As for the subject of a daily report, I shall also take exception to Dr. Barnard's criticism and methods. We find that particularly the report, very often a special daily report made in the collection of fertilizer samples, is very essential, particularly in maintaining a case if it comes to prosecution, and we have paid particular attention in the last year and a half or two years to our fertilizer control work. We, of course, have not yet experienced the idea of blocking our files or of the files becoming an encumbrance to us, but several times it has been my experience to need the reports of the inspectors. Then they have been of particular service to us and, while our state is not large and travel in some parts of it is rather difficult, and it seems a good thing to my mind to have a daily report from the inspectors, I do not feel that the score card is of any use whatever, particularly as applied to daily inspection. I do not care to possibly discuss that at any great length, but it has been my experience that the score card made out and handed down, placed on file and handed down becomes more of an encumbrance than the inspectors' daily reports. Another thing, which is possible more with reference to Dr. Alsberg's talk, if I may be pardoned in speaking of this at this time, is to outline to the members of the Association the ideal of co-operation among the states and the meeting which is held by the New England officials in Boston

and we feel it adds considerably to the efficiency of the work. It is held in Boston particularly because that is the center of location and seacoast and because the Eastern Laboratory is located there and the meetings have been very well attended by the Federal officials, which we all very much appreciate.

President Jackson: Mr. Stadtmueller, have you any remarks to make on this subject of Field Work and Its Control?

Mr. F. H. Stadtmueller: Much can be said on both sides. Certain lines of work and a definite territory has obvious advantages. It also has its disadvantages, as the inspector may become so well acquainted and so well known that he can never detect a violation of the law, because immediately he enters the store he is recognized and the whole object of his visitation is defeated. You have got to select between the two methods and you have got to use a little common sense.

I was very much pleased with the attitude expressed by Mr. Soule upon the score cards, not only as applied to bureaus, but as applied to everything else. One reason why those score cards are used is because the public likes them and another reason is because they are a method of record. I have no objection to them and as a matter of record the score card is perhaps very useful.

President Jackson: Dr. Rose, have you anything to say?

Mr. R. E. Rose: Mr. President, I do not think so. I have been very much enlightened by the expressions of the other officers and by Dr. Barnard and, like Dr. Barnard, I was the only man employed; I was the chemist and the inspector and the office organizer and it has been built up and it is like the house that Jack built.

I agree with Dr. Alsberg thoroughly that the inspector and the chemist should be close together and our law makes me analyst and also inspector, and I find it a very good plan when I find a suspicious territory to send out a technically trained man, a chemist, with my inspectors who are not generally scientists, and I get good results as Dr. Abbott and my friend Marks know by going out with them occasionally and meeting with the public and with the inspectors and explaining to the public his duties and their duties regarding these inspections; in other words, we try to make it co-operative between the lawful dealer and manufacturer and the consumer.

President Jackson: Are there any other Commissioners who would like to make any remarks upon this paper?

Mr. Harry L. Eskew: In regard to Dr. Barnard's paper, in the matter of daily reports, we have ten inspectors in the state of Tennessee on the enforcement of seven laws. We could not do without the daily report; the work is so varied, we have recently, in the last two months, inaugurated a sheet upon which we carry the whole work of the department on one sheet. Without those daily reports in the old time way, for instance, some of our anti-administration voters would accuse the department of not doing its work, of not investigating this part of the business and that part of the business. If we were not able at the time when the thing came up to dispute his word or to prove what we were doing unless we got an adding machine and got the books and if he just stayed long enough we would be able to prove to him that we were doing the work.

It is now possible to open the books and tell him that we have gone into five hundred drug stores. The minute we look at it the book will show how many have been prosecuted and for what purpose and how much time was used in the court work. We can do that by opening the book. The daily reports come in in the morning and inside of one hour after they come in we are in a position to give any information to any one in any part of the state that they wish. Before that it was impossible.

I thoroughly agree with Dr. Barnard that I could over-systematize any office, but there must be a happy medium.

As to Dr. Barnard with his inspectors covering the same territory; as you understand our department is under civil service; some of the men have been with the department for years, and I, going in as a new man, wondered just how well acquainted my inspectors have gotten with the people in the town. I knew it was possible for an inspector who had been covering a territory for five years to get too well acquainted. I made up my mind one week to change every man by wire, and Monday morning I switched them from one territory where they had worked all their lives, into a new territory. Gentlemen, you would be surprised at the results I got. I now follow that plan. They do not at any time know when I will do it. Each man has his headquarters, each man has his own territory, but next Monday week he may be changed from East Tennessee to West Tennessee without a minute's notice and it keeps them, to use a slang expression, on their P's and Q's. It is only quite natural for an inspector who has been covering a certain territory for five years to get very well acquainted with a man, and it is easy for the man to slap the inspector on the back and say, "Old man, I did overlook that, but I will not do that again," and the inspector will say, "All right, we will let it go this time." But a stranger coming in the man does not dare say it. If he did say it there would be no chance and the report would come in as it should come in. So, I believe that every man in every territory is human and there is such a thing as getting too well acquainted and for that reason we change them on five minutes' notice.

President Jackson: Mr. Eskew, that sounds very good. Rhode Is and undoubtedly will ask you for one of those sheets.

Mr. Harry L. Eskew: Our department is very proud of that sheet and I have wired for it. I forgot it, but I do not deserve credit for it. We took every man in the department and we made up sheet after sheet and we lead penciled and destroyed and made them over again until we were ready to go to the press with them and the only thing that I was really proud of I forgot.

President Jackson: Are there any other Commissioners that would like to make any remarks?

Mr. J. S. Abbott: May I make a remark, because I am not a Commissioner exactly? I want to say that I do not believe that Dr. Barnard means just exactly what his paper might indicate. In other words, I think the doctor does not mean to go quite to the extreme that he indicated, because there is such a thing as making an inspector an automaton. Nobody wants to do that. And there is such a thing as making an inspector a sort of a lion let loose and I do not believe that Dr. Barnard wants to do that at all.

As I get it he wants to get away from too much routine or too much red tape, or too much control over the inspectors' actions. Now, Dr. Barnard mentioned that certain reports from the inspectors, the number of hours spent with manufacturers, the number of hours spent in inspection work, the number of hours he did this and that and the other thing. Surely if Dr. Barnard is interested in keeping track of the inspector in a sort of a mechanical way, from a mechanical point of view, he would be interested also in keeping track of the inspector's real work in the performance of the functions of an inspector. I really think he does keep better track of the inspector than simply turning him loose. I really think he exercises more control over the inspector than simply turning him loose and allowing him to do everything on his own initiative.

I think that would be just as bad as going to the other extreme and making the inspector an automaton.

I have had the pleasure of associating with a man in the federal service who has studied inspection work very closely. He is a man of unusual ability, a man of fine training, and I have talked to him time and time again and hour after hour about the philosophy of inspection work, and he made the remark to me recently that any one who had the slightest conception of the elementary principle of food and drug inspection would never consider for a moment turning an inspector loose on his own initiative to do food and drug inspection work without a very clear-cut, definite control on the part of the chief inspector, or the man who controls or who is responsible for that man's action.

So I would not like to see Dr. Barnard go on record here before the country in the way that appears to be indicated by his paper, for I do not really think that clearly represents Dr. Barnard's idea of inspection control.

Dr. H. E. Barnard: I do not really believe so either.

Mr. J. S. Abbott: There is another subject on which I would like to make a few remarks and that is in connection with the remarks of Dr. Barnard and that is with regard to the question of clerical work, the keeping of records or filing data. There is not an organization in the country that is worth while that has not got an efficient system of record keeping, not a one, and I believe that Dr. Barnard has a good system of record keeping. I could not any more run my office without a great deal of this filing and indexing than I could fly to heaven.

I got a letter today from some food official and he asked me what is the attitude of the officials of the country with respect to the use of the word "artificial and imitation." If I have not got an index of every statutory law on that word, as that word is used in the law, and if I have not got an index of every food inspection decision, of every commission in the country, I have got to sit down and go through every law and every rule and regulation in the country and answer that man's question.

The same thing applies to everything else with which my little office has to deal as your servant and the servant of the federal official. It has been necessary for me to undertake to index every food and drug law on the statute books. We are doing that and we hope to get up to date in a little while and keep it up to date. I have got to index every rule and regulation and keep them. There is a tremendous lot of that sort of work to do and the man who is efficient as an administrator, is efficient in his system of keeping on file so he can get at it when he wants it, any data he needs, and the man who does not keep an efficient system of records and index cards, and all this, will have to trust to his memory or go back and dig up all the things that have happened in the past, is burdening himself with a tremendous labor and responsibility.

I wanted this year to make a report to this Committee on Co-operation on every sample that had ever been collected of an interstate character by the state officials. I wanted to let you know what had become of those samples which I have collected. When I attempted to find it, to get it, I found out that in the past our department has not kept a record of the number of samples collected by you. If I had had the number of samples which you collected, I could go back and get a complete report on everything you have done and tell you what disposition we made of it, but I could not do that. I asked one official if he could give me that and he said, "Yes; I can give you the number of every sample I have ever collected from the Department of Agriculture," and he did it and I made a complete report. When we get the records on those numbers made we will have a complete report of the disposition of every sample which he had ever collected.

Starting a year ago, my office established a system of filing by which I will know the number of every sample that every state official collects and I expect to follow that sample up and report back to you what disposition the Bureau has made of that sample which you collected. So beginning with one year ago today I can report to you on every sample collected from that day henceforth and from now on to eternity.

And I want to tell you right now if a man is left out in the field with all of this trouble trying to find out something that is bad, and he gets something that he thinks is bad and he sends that along up to his superior officer and never hears from that, in five years that man will not be worth keeping. It is not giving him a square deal not to let him know what disposition you have made of what he considered to be important.

I believe there is an opportunity there for co-operation. The man in the field, bless your soul, has my sympathy. I have been in the field, too, like a whole lot of the rest of you and I know what it means and so I simply beg to take this much time to try to tell you that Dr. Barnard did not really mean to tell you what he did.

Mr. Harry L. Eskew: I hope you will pardon me, but as a matter of system, speaking of loading down the inspector with work, we are following a plan now by which every order that comes in, or rather every report that we send out, before we send out that order, we make it out in duplicate. We file one and send one to the person to whom the order is given, and one is sent to the inspector. We have his route list on file one week before it takes effect, and when we get that we send it to the town in which that man will be, we will say on Monday morning, a copy of everything which was transacted in the town, and what has to be finally settled.

Now the point is this: A man comes to the hotel and it may

be that he has never been in the town before, or never in that territory before, because as I said I change my men. He goes over the stuff that he has in his pocket and he walks into John Doe's store and he says, "John, I see that you have got your sugar barrel covered up this time." And the man wonders how in the world he knows about it.

That is a good thing. We are leaving the impression all along that there must be somebody on the job watching and we are watching it very closely. For instance, if a case is drastic enough, we always send the last notice under a special delivery with a signed receipt requested. When he goes back to the town next time, he has attached to the order the return receipt and he goes into a man's store for re-inspection and there is no use for that man to say, "Well, if I had known this or that; you forgot to tell me." He says, "I beg your pardon; here is your signature and you have not done it and we are going to prosecute you."

We are prosecuting in our state within fifteen days from the time it was sent out. When we send out the last notice we make up our minds to prosecute, and ten days after the last notice is sent out and they do not stop it, we prosecute them. If the inspector goes back and finds that they have not stopped it we prosecute them.

I merely mention that as a system because it leaves the impression that we are watching things. They know that they can no longer talk to an inspector and say, "Well, we will do that just as soon as we can, if you will give us ten days." Then another inspector will come back and he will be under the impression that the other inspector knew nothing about it, and he tries to get out by telling him if he had known about it, or if he had gotten information he would have taken care of the matter. We have it in such a shape that it will not excuse him. So that matter is causing us less trouble all the time by adding a little bit of system. Now when a notice is sent them they do not stop to write, but they telegraph.

President Jackson: Are there any other commissioners who desire to say anything?

Mr. W. Scott Matthews: I would just like to take a second because I think I ought to. I went into office three years ago and I did not know much but if you will excuse my being personal for just a minute, I will state that I wrote Dr. Barnard and Prof. Barney of Iowa, and Mr. Helme of Michigan here and Dr. Crumrine of Kansas and Dr. Ladd of South Dakota, and two or three other commissioners, and I told them that I had just been appointed and the first time they were in Chicago I would like very much if they would call in to see me and give me the benefit of their experience and advice.

They all responded, and I just mention that because this is the first meeting that I have tried to participate in. They told me, by the way, in substance, that the best thing that I could do would be to keep my mouth shut and my ears open and I have tried to follow that suggestion when I could.

With these extended remarks, I must apologize for getting up here and talking about Dr. Barnard's paper, because I feel I ought to—by the way on that question of advice, Dr. Crumrine, who seemed to be the most modest one of any of them, I thought would be the easiest on me, and I got him to stay ten days and help me out. He seemed to be the most modest one, but do you know he fooled me. He is the worst you ever saw. He must have been a school teacher. I was very glad to have him with me but he does not mince his words a bit. He is all right but he is very severe when he is over you.

In fact we are all right and in regard to Dr. Barnard's paper, I think it is all right in a way. Here is what he had in his mind. There is so much fuss made about these infernal reports—I should not say infernal reports, but I mean these reports—everything is reports, reports, and the fellow is judged so frequently by his report, the report that is made on paper, everything is reports, and the man that is trying to do something often gets disgusted with so many reports and so little done. I think he had that in mind when he wrote that.

I like these daily reports, but every man has different conditions in his state. Every man has matters in hand differently. He has different problems. I am free to admit that I think Dr. Barnard's paper is all right for his state. The reason I am telling you that is this. I have taken in Indiana and Illinois, which lie side by side, and I have spent a good deal of time in looking over Indiana and the conditions that exist there, and I have taken the things item by item and I tell you I would be awfully slow to criticize Dr. Barnard on anything he has done in his state. His state is in fine shape. He has been of great help to me in what he has done in his state; it has helped me greatly, the work that he has done in his state; it has assisted me in handling many problems in Illinois and I want to tell you that I am for Dr. Barnard because I feel he is a conscientious, painstaking state official, and I feel pretty certain of what I am talking about. I think he is all right, only I think he possibly went a little bit too far on paper, as Dr. Abbott says. He possibly said some things that we could not afford to say in our state.

President Jackson: Has Dr. Barnard any remarks to make?

Dr. H. E. Barnard: I think this discussion has shown us that the most delightful thing in the world is a good sense of proportion, and the next best attribute a man can have is the saving grace of humor.

I know you men so well that when I wrote my paper I knew in advance that you would not pay any attention to anything I had to say. I wrote my paper, as my good friend from Chicago has said, from an Indiana viewpoint, and I shall have to confess to you gentlemen that the facts are somewhat different perhaps as they appear on paper.

I know the work that everyone of our men is doing; I know what he is doing in the office all the time. He is in the office in conference with me and the inspectors and chemists at least once a month and I have such a system of files that they simply overpower me. I am doing as well as I can do all of the things which you commissioners know are the proper things to do, but I have been in the work for so many years that sometimes—and when I wrote the paper was one of the times—and I am just wondering whether or not, as Commissioner Matthews so admirably said, there is not too much fuss and feathers about some little work. I shall have to ask you, therefore, to pardon any suggestions in my paper which would seem to be

out of harmony with the work of the food official in his own particular state.

President Jackson: This closes the business for the afternoon. Dr. Smith's paper will be taken up next. Our next meeting will be Tuesday evening. That will be a meeting of the Food Executives to discuss different questions. It will be a close meeting, a heart to heart talk on subjects that interest the executives of the different states.

The second session was executive and was not reported.

SECTION A—THIRD SESSION, THURSDAY AFTERNOON, AUGUST 10, 1916.

President Jackson: During the last meeting, we postponed one paper, No. 2. We will now listen to a paper by Mr. Heber C. Smith, Dairy and Food Commissioner, Salt Lake City, Utah, on "Control of Sanitary Conditions of Groceries and Markets."

INSPECTION OF GROCERY STORES AND MARKETS.

BY HEBER C. SMITH, UTAH.

Mr. Chairman and Gentlemen: The educational campaign for improved sanitary conditions in our food markets which has been so industriously carried on throughout the length and breadth of the land has had its effect on the average grocer and market man as with every one else.

The grocer has had the assistance of the state and municipal food and sanitary officials, who have inspected his place of business and pointed out where improvements could be made which would enable the dealer to maintain a higher standard of sanitation. The market now offers him sanitary equipment in the shape of refrigerators, display counters, show cases, etc., to keep his displayed foodstuffs from being exposed to dust, dirt, flies, mice and other sources of contamination so there is now no reason why we should not expect these places to show a wonderful improvement along sanitary lines.

And yet, notwithstanding all this, we have grocery stores which are a constant source of trouble, where no effort is seemingly made to respect the law which requires the sale of none but clean, wholesome food products. All around such places of business are found uncovered, in sacks, boxes, barrels, tins and dilapidated bins, bulk groceries, dried fruits, bakers' goods, cheese and other foods exposed to the dirt and flies and to the dust which settles down every time the store is swept or the wind blows. Old counters or "catch-alls," as Commissioner Barney calls them, are a rendezvous for mice and encourage the worst kind of insanitary conditions.

When a dealer persists in disregarding all efforts at sanitary protection, then patience ceases to be a virtue and the only alternative left the food executive is to bring prosecution. Either that, or else admit there is no efficacy in the law, and let matters run their course as best they may. Most of us, therefore, go into court with our most aggravated cases. Sometimes we win but more often we do not, because of the many loop-holes pettifoggery and political prosecutors find in our laws, through which they can ride in safety without even so much as offending the defendant, who may, perchance, be a friend of some one in authority.

Certainty of conviction is an indispensable in the enforcement of food laws. Nothing stays the hands of the criminally careless so much as the certainty of sure, swift and successful prosecutions.

When a prosecution fails in court, encouragement to disregard and defy the law is given to every unscrupulous dealer. We do not fall down so much in our proof as we do in what is known as "Official Interpretation of the Statutes." What we need is a brief but invulnerable law requiring the sanitary protection of all foodstuffs, and a penalty for offering or exposing for sale any foods which have been exposed to flies, dust, dirt, insects, animals, or other contaminating conditions, making such exposure prima facie evidence of their unwholesomeness and contamination.

Two-thirds of our states need such a law as this and need it badly; even large states are helpless in this particular.

Only just recently, according to a statement published in the Journal of the American Medical Association, Professor C. H. LaWall, chemist of the Pennsylvania Dairy and Food Commissioners, is said to have found the following assortment of objects and substances in raisins exposed for sale in the city of Philadelphia: Pieces of prunes, beans, rice, strands of human hair, cat fur, cotton and wood fiber, straw, bits of bran, insect wings and legs, cigar and cigarette ashes and a yellowed cigarette paper. While it is true that the presence of any of these unappetizing accessories did not prove that they were carriers of contagion, the findings, however, strongly suggest the possibilities of infection from such unprotected foodstuffs.

Unfortunately, Pennsylvania is one of the many states which have no adequate sanitary laws to protect the consuming public, as evidenced in the following case: The people of Philadelphia, feeling their need of some additional protection and believing that their hope lay in the strong arm of the commissioner who had made a ruling under the authority given him by the food law of that state, addressed a petition to that official and had every civic and similar organization in that good old city of brotherly love meet and endorse their petition. Commissioner Faust's ruling that the women had reference to read as follows:

"Under the provisions of the sixth clause of Section 3 of the act, an article of food is adulterated where the same is an animal or vegetable substance produced, stored, transported or kept in a way or manner that would render the article diseased, contaminated, or unwholesome. Under this clause of the act, meat preserves and similar food substances that are liable to

become contaminated by exposure to flies and other insects, or exposed to the dust of the street or store, will be required to be kept screened so as to prevent all contamination."

The women of Philadelphia asked Commissioner Faust to include in this ruling the wrapping of bread, for they considered such a declaration as embodied in his ruling broad enough to cover any ease of food contamination, and undoubtedly these good women considered it could be applied to makers and compel them to screen their bread by wrapping it, but Commissioner Faust held a contrary view for he told his petitioners, "I cannot assume authority which I do not have. I can only enforce the law by bringing a criminal prosecution and whenever a criminal prosecution is brought I must prove beyond all reasonable doubt that the article is contaminated."

"You will readily see how it is almost impossible to get such proof in the case of contamination by flies or dust, unless the food has been kept so long as to become putrified."

However, to be sure of his premises, he approached the attorney general of his state for an opinion on the following:

First: "Under the law, the enforcement of which is committed to the dairy and food commissioner, can the wrapping of bread, so as to prevent possible contamination in the handling thereof, be compelled?"

Second: "Can the dealer in foods be compelled to keep such food when exposed in his store or displayed in front thereof, covered so as to protect the same from flies and other insects, from the dust of the store or street, and from other possible contamination?"

Third: "Has the dairy and food commissioner the power by the making and promulgation of a rule or rules, to require of dealers the wrapping of bread and the protection of exposed food in the store or while on display in front of the store?"

In a lengthy opinion, the attorney general held that the law was not sufficient to enable the commissioner to establish and enforce such regulations as were here in question, and further that under the language of the Food Act, to secure conviction of offenders it was necessary to prove, not merely that the conditions under which bread and fruit were distributed or offered for sale were such as might result in disease, but that the particular sample of food purchased had in fact become diseased, contaminated or unwholesome by reasons of the conditions under which it had been kept, transported and sold.

Says he, "Mere proof of sanitary keeping, handling, etc., of food is not sufficient in itself; there must be also proof of disease, contamination or unwholesomeness as a result of such unsanitary keeping."

It might well be asked, what good is a statute of that kind, if the attorney general's position is sound? No wonder Commissioner Faust told his petitioners that it is almost impossible to get such proof in the case of contamination by flies or dust. And so the good women of the Quaker City got no ruling requiring the wrapping of bread, notwithstanding they furnished instances of the worst kind of contamination, as for instance:

"A man was seen to use the sleeve of his coat in place of a handkerchief and then fill the same arm and sleeve with loaves of bread to carry into a store."

"A driver slipped in getting out of his wagon with a basket of bread and dumped it all out into the street. In picking it up, so that it would be nice and clean, he blew the street dirt off of each loaf and biscuit with his breath. Another driver did the same with his pies before taking them into a store on Ninth street."

"A man was seen delivering bread, picking up the loaves to take into a house, with hands covered with scabs."

"A horse was seen being fed out of the box in which the bread is packed when it leaves the bakery. It is to be hoped the box was thoroughly cleaned before being refilled. But how do we know it was?"

"At the rear of one of the bakeries there is a small street where the wagons back up to be loaded with bakers' products each morning. On the opposite side of this street there are small houses. The people living in these houses empty their dirty water into this street and it splashes on or near the bread, waiting to be packed into the wagons. How could it splash on the bread or even get near it? Simply because the bread, with absolutely no protection, not even paper or a board, was piled on the pavement before it was put on the wagon."

After such proof, remember again what the attorney general said: "Mere proof of unsanitary keeping, handling, etc., is not sufficient." I am so interested in this "official" interpretation that I quote further the attorney general with reference to the commissioner having no power to make rules or regulations:

"You cannot by a rule or regulation include anything not covered by a proper construction of the law. As the law is written and enacted by the legislature, so it must remain. Such rules and regulations are not law, are no part of the law, are not binding upon the courts, cannot be made the basis of indictment, and have value only for the purposes indicated. The successful prosecution of bakers for delivering unwrapped bread is not generally possible, because of difficulty of proof of such facts as would show a violation of law. Why, then, make and promulgate a rule requiring the wrapping of bread? Such a rule cannot be enforced, neither will its adoption and promulgation correct the evil complained of."

Now let us see the difference. In New Hampshire, the State Board of Health enforces the food and dairy laws, the same as does the dairy and food commissioner in Pennsylvania. Section 4 of the New Hampshire law empowers the State Board of Health "to make all necessary rules and regulations for the enforcement of this act," exactly the same language employed with reference to the power given the commissioner of Pennsylvania.

Exercising this power conferred by statute, and without asking the attorney general whether they could or could not do such a thing, the State Board of Health adopted a rule requiring loaves of bread exposed for sale to be wrapped in paper, the very ruling the good housewives of Philadelphia wanted the commissioner to make under his authority which the attorney general of that state declared he had no power to enforce.

One of the bakers defied this ruling of the State Board of Health and he was arrested, tried, and convicted. The superior court found upon the evidence submitted that the rule promulgated was a practical one, and was necessary and reasonable.

Also that the board was legally authorized to make the rule in question.

The defendant appealed the case to the Supreme Court, and that judicial body affirmed the decision of the lower court unanimously.

Now see how reasonable and sensible the conclusions reached by the Supreme Court of New Hampshire are:

"To secure an efficient enforcement of the act, and to accomplish the legislative purpose, the State Board of Health is charged with the enforcement of the law, and for that purpose it was authorized to make all necessary rules and regulations."

"This provision was not intended to authorize the board to legislate or to add to, change or modify the statute. It was not intended as a delegation of legislative power. The 'rules and regulations' were to be such as might be deemed necessary for 'the enforcement of this act.'"

"In order to prevent flies from congregating on the loaves of bread in bakers' shops and in their carts, one of the objects the legislature had in mind, some general rule, if a feasible one could be devised, was necessary for the practical enforcement of the act, and when the Board of Health made the rule requiring loaves of bread to be wrapped in paper, they were not legislating but merely exercising a power conferred upon them by the state as administrative officers. It was their duty to enforce the law, and the rule they promulgated in the exercise of that power was a means they adopted for the accomplishment of that purpose. They merely devised a reasonable and effective method by which the legislative purpose could be carried out."

"Such delegation of power is not unusual while it is necessary that a law, when it comes from a law making power should be complete, still there are many matters relating to method or detail which may be by the legislature referred to some designated ministerial officer or body. All such matters fall within the domain of the right of the legislature to authorize an administrative board or official to adopt rules or regulations in aid of the successful execution of some general statutory provision."

My object in calling attention to these two cases is for no other purpose than to show the difficulties surrounding the commissioners in enforcing the laws committed into their hands. There is so much "official" interpretation and fine hair-splitting that we are sometimes bewildered. The more specific we can get the law and the more definitions it contains, the better it is for all concerned.

Some of the states are very fortunate in this respect. In most of our food laws we have that well known definition of adulteration: "If it consists in whole or in part of a filthy, decomposed or putrid animal or vegetable substance," and there we stop. But with Texas and Oregon the law goes on to define what the word "filthy" shall include, and it says: "For the purpose of this act the term 'filthy' shall be deemed to apply to food not securely protected from flies, dust, dirt, and as far as may be necessary by all reasonable means, from all foreign or injurious contamination." Armed with a law of that nature, our friend Faust of Pennsylvania would have been in a position to give the women of Philadelphia the protection they so much desired and which they in common with the vast army of consumers should have.

On page 7 of a bulletin published by the New Hampshire State Board of Health we find this excellent definition:

"Food is adulterated if it consists in whole or in part of a dirty or decomposed animal or vegetable substance. This applies to spoiled meats, decayed fruits, wormy products, and dirty groceries."

California, New Jersey, and possibly other states have a simple declaration enacted into law in substance as follows:

"It shall be unlawful for any person, firm or corporation to sell or offer for sale any article of food that has not been securely protected from flies, dust, dirt, animals and other foreign or injurious contamination."

The Kentucky law, according to a circular to retail grocers recently put out by the State Food and Drug Department, not only prohibits the sale of unsound or spoiled foods, "but also the sale of all foods that have been exposed to the danger of contamination, especially to flies, street dust, etc."

Maine has enacted into the law the following excellent definition of adulteration: "An article of food shall be deemed to be adulterated if in the manufacture, sale, distribution, or in the offering or exposing for sale, it is not at all times protected securely from filth, flies, dust or other contamination or other unclean, unhealthful or unsanitary conditions."

Why cannot we, from all these legal definitions, frame some general law affording the protection desired? Would not the passage of some suitable resolution by this convention give material aid when we go before our legislatures to secure the enactment of such a law? Will not the states here represented which are so fortunate as to have this protection, and have secured such good results as a consequence, help those of us who are struggling and anxious to achieve a similar high standard of sanitation?

"The need for sanitary laws," says Dr. Ladd in a recent number of his bulletin, "is fully as great as that for food laws, for some of the worst conditions are those surrounding the manufacture, sale and distribution of food products, where decomposed material is used, where unsanitary surroundings are permitted or where persons are employed in the manufacture and handling of food products who are afflicted with infectious or contagious disease."

Dry goods dealers and clothing stores have recognized the necessity of placing all of their goods behind glass to protect them from dust and to keep them in the best possible shape. But pass from the clothing store to the grocery or confectionery store and what do you find? Those products to be taken directly into the stomach are exposed to every sort of contamination, from the handling of those whose hands are filthy to the sweepings from the floor, and then we wonder why an unkind Providence has stricken us down with a disease that has come through food which we have eaten. "The people are demanding," says Dr. Ladd, "that their foodstuffs shall be under glass and properly protected from contamination. The dealer who fails to recognize the needs of the times will soon find that he is losing customers. But the dealer who stops to have things

in the best possible shape is the one who will come to the front."

Much valuable co-operation is being given by all classes in the efforts of the commissioners to "clean up" our food markets. Even the merchants themselves have gone on record as willing to help the food officials. Only a few weeks ago the retailers of South Dakota at their nineteenth annual convention adopted the following expressions of their interest in the good work:

"Be It Resolved, That this Association co-operate with the State Food and Dairy Department in the effort which the Department has put forth to improve sanitary conditions under which food is handled and sold. The widespread awakening of public interest in these matters has made such headway that no merchant who values his business can afford to overlook the absolute necessity for taking proper precautions to see that his stock is kept at all times neat and clean and his stock of perishable goods is kept under the best sanitary conditions."

Every organization of retail merchants in every state could well afford to pass similar resolutions, thus giving encouragement to the food officials in their campaign for better sanitary protection to food stuffs.

In summing up the points aimed at in this paper, let me say in conclusion that I had the following in mind in connection with a general discussion of my subject:

First: That rules and regulations authorized by statute will be upheld by our courts so long as they do not trespass on the legislative body. They must be such as are necessary for the practical enforcement of the act, devising a reasonable and effective method by which the intention of the legislature can be carried out. They can be resorted to for the purpose of making more plain the object of the law, and thus placing all affected by the law on their guard.

If a construction is thus placed on the law by a food official which a defendant deems arbitrary or unauthorized by the legislature, then, as in the case of the New Hampshire baker, he has the right to appeal to the court.

Second: It is a sad fact that an imaginary state line can defeat the purpose of the law. I believe that laws worded identically the same should be as effective in one state as in another in affording the consuming public that sanitary protection to their food supplies which is necessary to conserve the general public health.

Third: Laws should be as complete as possible so as to avoid so much official interpretation on the part of public prosecutors which so often renders uncertain the enforcement of the law.

Fourth: This Association declares in favor of an amendment to the adulteration clause of our food laws, state and national, so as to define the word "filthy" the same as is defined in Texas and Oregon.

Fifth: This Association by proper resolution should pledge itself to endeavor to secure the passage of needed legislative relief in the direction indicated.

President Jackson: Response to Mr. Smith's paper will be by Mr. Frary, of South Dakota.

REMARKS OF G. G. FRARY.

Mr. President and Members of Section A: I owe you an apology for not having prepared a written discussion of Mr. Smith's paper but I did not know that I was down to discuss it until just before I left and then when I got here Mr. Smith said that it was just a general topic and I would not need any written paper.

I appreciate the difficulties which Mr. Foust has had in Pennsylvania in the enforcement of regulations under the law of his state. I believe that we ought to take cognizance of the fact that rules and regulations in order to have the force and effect of law, must be properly authorized by the legislature and means for their publication in official papers must be provided in the law and I think also that they should be approved by the attorney-general before such publication takes place.

The reason, I believe, the New Hampshire State Board of Health on the regulation of wrapping bread was upheld, and the regulation of Mr. Foust on the wrapping of bread was not upheld, is to be found in this difference of the law. State Boards of Health are usually covered by statutes carefully authorized to promulgate and issue rules and regulations, and the provision is made in such authorization for the proper inspection and approval of such rules and regulations by the attorney general, and the publication in official papers before they become effective.

We have a so-called sanitary food law in our state enacted in 1913, which has been very unsatisfactory. It provides that the State Food and Drug Commissioner shall make uniform rules and regulations for the enforcement of the act and all persons coming under the jurisdiction of the act, according to the words of the law, must abide by those rules and regulations.

I asked for the opinion of the attorney general as to whether rules and regulations issued under that act would have the force and effect of law, and the attorney general's opinion thereunder given is to the effect that rules and regulations made under that act would be all right, but a subsequent opinion from him reversed that decision, because since he gave me that opinion the Supreme Court has decided a case taken up under our banking law, under our state banking department, that rules and regulations made by the bank examiners did not have the force and effect of law and could not be enforced.

This sanitary law did not give proper authority for making rules and regulations. It did not provide for their approval by the attorney general, nor did it provide for means of publication. In writing these regulations I made them pretty broad and just about a model sanitary food law, because that is what I wanted and which the legislature did not give me two years ago.

I think the provision in the Maine law is a most excellent one and if I see our legislature next winter is not giving us a complete sanitary law, I am going to endeavor to get the definition of adulteration similar to the Maine law, which Mr. Smith read to you. If I am not successful in getting that I am going

to try to get a sanitary law closely modeled after the Minnesota state law, which I think is very good, and while it may not be perfect, or may not be as good as the Maine law, it is still very effective.

Going back to the question of sanitary groceries and meat shops. We must have a law that we can enforce without question. As I said yesterday, or the day before, or whenever it was that I read my paper, I believe even with a good law and money to enforce it, you have got to have good newspapers, and, without boasting at all, I can say that we have done a great deal of work in our state by moral suasion. Our bakers have enclosed their front windows so that their display is all enclosed. We have gotten a great many butchers to put in refrigerator cases and to do away with displaying meat on the block. We have gotten a great many groceries to put in sanitary cases, and we have gotten a great many of those merchants to use far more care in keeping their place clean, not only in front but in back. We do not stop at the front, but we go into the coolers and into the back rooms to see if the utensils are clean, and we go into the back yard to see that there is no rubbish or refuse accumulating there.

I was much impressed with what Dr. Crumbine said yesterday about the unsanitary privy. It is hard to conceive how one can tolerate such contamination in many back yards, but they are becoming fewer and fewer every day. I think if we insist that they be not allowed it will be possible to have that condition remedied. We find in our state our people have become quite respectful from our state law. We have made prosecutions in the last three years and have some good stiff fines, so now when we go in and tell a man that he has got to clean up dirty out-houses he does so, and he cleans whether the law provides for it or not. I do not think we should confine ourselves too closely to the letter of the law, but, of course, we should not go beyond the law, although in many places like those I think we are justified simply from the standpoint of common decency in insisting on some of those things because no decent person will maintain such places and the indecent persons do not know but what we have the authority to insist upon their abolishing them. I thank you.

Mr. Jones (Department of Agriculture): It is quite evident that there is more or less confusion in the minds of the executives in regard to the power of the state or the federal government to confer power upon the administrative officers to make enforceable regulations. Might I suggest to the gentlemen when they go home that they obtain a volume of the Supreme Court reports and examine the case of the U. S. vs. Antikamnia Co. It is a very far-reaching decision and I believe it shows an admirable exposition of the power of the state or the federal government to confer power upon administrative officials to make enforceable regulations. The principle is about like this: That the power may be delegated to make regulations which are reasonably adapted to carry out the purpose of the statute, and I think if all you gentlemen will read that decision you will have a clearer conception of your powers, as you may also find it useful, after making your regulations, in defending them against any attacks made upon them. I think it will be necessary when you have the duty imposed upon you of forming regulations, and also when they are attacked in your courts.

Mr. J. D. Mickle: I also had some experience in this regard. I went to the legislature for a new law and that matter of rules and regulations came up before the committee and a number of the lawyers disputed the authority of any man to make rules and regulations and they asked me to show them any such cases having the effect of law. I had some revised decisions before me and I gave them at least two decisions. Perhaps they might be of interest to you. They were the U. S. vs. Grimaud, and also the United States vs. Light. One of them I think is a Canadian case and I do not remember what the other one was.

Mr. R. E. Rose: We are very fortunate in having our sanitary work under the State Board of Health's direction, which is a constitutional body. This was enacted for a special purpose at a special term of the legislature after our yellow fever scare in 1888, when an extra session of the legislature was called because of the yellow fever, and they created a State Board of Health. Our present State Board of Health then created at the same time a constitutional amendment providing for a half-mill constitutional tax, which was passed, and it has been in existence ever since. Those rules and regulations are approved by the attorney general and are in accordance with the law. This does away with any trouble, as there is a great deal of sanitary work to be done.

We have another Hotel Commission which has charge of play houses, public entertainment, the sanitary conditions of their kitchens, etc. That includes boarding houses, restaurants, cafeterias. That assists us very much. So far as our conditions are concerned, we have not improved as far as we want to in our sanitary work, but we have a very efficient sanitary law.

President Jackson: Are there any further remarks, gentlemen?

Mr. Heber C. Smith: I would just like to make one statement in regard to what Mr. Frary said. He said there was a difference between the state of New Hampshire and the state of Connecticut, and as I understood his remark he stated that the State Board of Health when they were delegated that authority to make rules and regulations they went further than they were entitled to.

Mr. G. G. Frary: I think that is the case in a great many of the laws. That was Pennsylvania instead of Connecticut.

Mr. Heber C. Smith: A decision of the Supreme Court of New Hampshire held that the making of these rules and regulations were not legislative but merely to carry out the provisions of the law. The law was made; it was not added to or taken away from, but it merely created the means whereby the purpose of the law could be carried out, and it seems to me that the attorney general made a mistake in view of the fact that the Supreme Court of the state of New Hampshire held that the same thing was constitutional.

Mr. F. H. Stadtmueller: I think a great deal depends upon the attitude of the local man in two states and I think it rests very largely upon the attitude of the court towards what the

courts term public health measures. Courts are very strict in the interpretation of the law and are always disposed to give the public the benefit of any measures that are approached from the angle of public health per se. However, health may involve other considerations and I think that the attitude of the courts is less stringent on food questions than they are where public health measures are concerned.

Mr. George L. Flanders: The previous gentlemen referred to the court of Massachusetts, that it held something unconstitutional.

Mr. Heber C. Smith: I referred in my paper to the Pennsylvania rules and regulations regarding the wrapping of bread. The State Board of Health of New Hampshire made a ruling similar to the one in Pennsylvania, which was declared by the attorney general would be unconstitutional, the New Hampshire State Board of Health made the same ruling as they had the authority to make rules and regulations for carrying out the provisions of the law; they promulgated a rule requiring the wrapping of bread. A baker was arrested and tried and convicted in the Superior Court and the case was appealed to the Supreme Court and the Supreme Court held that the State Board of Health was within its jurisdiction in making such a ruling.

Mr. George L. Flanders: Of course I think it is purely a legislative function which can't be delegated, and the power exercised in Pennsylvania and held unconstitutional by the attorney-general probably was not provided for as a means of carrying out the law. Do you know whether in the state of New Hampshire the law provides for the making of rules and regulations compelling the wrapping of bread, or were they simply rules and regulations carrying out the provisions of the statute? My understanding is that you cannot make rules and regulations that in any way add to or detract from or anything that puts a burden upon the dealer that the law does not provide for.

President Jackson: Mr. Barney would like to make an announcement.

President Barney: We find that we have so much business to attend to that we will have to hold an evening session this evening, consequently we will meet at 7:30 instead of 5 o'clock this afternoon, as this seems to be the desire of the commissioners.

President Jackson: Is there any further discussion of this subject?

Mr. Heber C. Smith: I would like to read a paragraph here in regard to what Mr. Flanders has said. These are the words of the Supreme Court of New Hampshire:

"In order to prevent flies from congregating on the loaves of bread in bakers' shops and in their carts, one of the objects the legislature had in mind, some general rule, if a feasible one could be devised, was necessary for the practical enforcement of the act, and when the Board of Health made the ruling requiring loaves of bread to be wrapped in paper they were not legislating but merely exercising a power conferred upon them by the state as administrative officers. It was their duty to enforce the law and the rule they promulgated in the exercise of that power was a means they adopted for the accomplishment of that purpose."

Mr. George L. Flanders: It seems to me, according to what has been read, that the power they exercised was conferred in the statute. Of course we have not got the statute and we cannot say. There is another proposition that may be involved in this matter and that is that one constitution provides one thing and another provides something else. There is a difference in constitutions themselves.

Mr. T. L. Calvert: The State Board of Agriculture, which the bureau and food department is under, is authorized to make any rules and regulations not otherwise provided for. Our board has made a great many rules which have been gotten up by our bureau and we have had no trouble in winning our cases. I do not think we have ever lost a case.

Mr. George L. Flanders: I want to say one more word and I would like to refer you to some citations: See Cooley on Constitutional Law, under Delegation of Power; see Willoughby, Vol. 2, under same heading; U. S. vs. Dix, 124, N. Y. State Court of Appeals; People vs. Kink, p. 121, and other cases. Mr. Justice Lurton said that it is the fundamental principle of our government that the law making power being given to our legislature, it cannot delegate that power to any one, except as provided for in the constitution.

Mr. A. M. G. Soule: According to your interpretation of the law is it possible for the legislature to delegate authority to the officers or food commissioners to make those rules and regulations?

Mr. George L. Flanders: They cannot make any rules or regulations that add to or detract from the law but they can make rules and regulations to carry out the provisions of the statute, but not to add to the law.

When you make a sanitary ruling that places a burden upon a producer or seller, not provided for by statute, it is simply exercising an autocratic power which the constitution does not give you the authority to do.

Mr. Heber C. Smith: Mr. Flanders did not hear my paper read and evidently he has the idea that the purport of the paper was that you could make rules and regulations adding to or taking away from the law. That was not the idea conveyed in the paper, or the conversation that took place after the reading of the paper. I merely asked the question to find out your views on this subject; in fact, one of the gentlemen told me that he had such a case.

President Jackson: Are there any further remarks on this paper? Mr. Street's paper will be read by title because he is pretty nearly exhausted with his labors of the past few days.

SKIM MILK AS A HUMAN FOOD.

BY JOHN PHILLIPS STREET, CONNECTICUT.

In these days of high food prices, of rapidly increasing population and of threatened diminished production in our beef supply, the conservation of any food material, especially an animal food, is of the greatest importance.

Animal albumin is a most important factor in the food of

man, the general opinion being that we should take one-third of our protein requirement in the form of animal food. The main sources of this supply are meat, eggs, milk, and milk products. Meat possesses the unique advantage of being the only form of animal food that man can continue to take with pleasure in sufficient quantity to satisfy the body's demands for albumin, whereas in the case of milk, for instance, the consumption of the necessary quantity sooner or later causes a distaste for it with most people. The problems connected with a reliance on meat for the needed protein supply lie in its expensiveness, the difficulty in excluding disease, and the alterations in flavor and digestibility experienced in the various drying, pickling and smoking processes employed.

Whole milk naturally suggests itself as a relatively cheap source of animal protein, but the often condemned, rarely appreciated, skim milk is even cheaper for this purpose. As Robert Hutchinson says: "Its great value in the dietary of persons to whom economy is of importance cannot be overestimated."

Let us consider just what skim milk is and the reasons for the prejudice against it as a form of human food.

Skim milk is the lower layer, comparatively poor in fat, which remains when the cream is removed from milk by skimming or by mechanical means. Its composition naturally is affected by the process used for its production. In the shallow pan method the solids will range from 9.75 to 10.50 with fat from 0.50 to 1.00 per cent, while in the deep pan methods the solids range from 9.50 to 10.25 with fat from 0.40 to 1.00 per cent, while in the centrifugal system the solids may range from 9.25 to 10.00 with fat from 0.35 to 0.45 per cent. By the modern separator the fat content may be reduced to less than 0.10 per cent.

An accurate descriptive definition of skim milk, therefore, is by no means a simple problem, and the difficulty is enhanced when one considers what the term "skim milk" apparently means to the legislators in our different states. The present federal standard defines this product as "milk from which a part or all of the cream has been removed and contains not less than 9.25 per cent of milk solids." The new standard at present under consideration by your Standards Committee requires that "it shall be Grade A or Grade B milk from which a part or all of the cream has been removed, and contain not less than 8.5 per cent of milk solids not fat." Many of the states have adopted the present federal standard, but in others we find wide differences of opinion. Among the standards adopted are 8, 8.8, 9, 9.25 or 9.3 per cent of milk solids, 9 per cent of milk solids not fat and in two states specific gravity limits of 1.032 and 1.037 at 60 degrees Fahr. have been established. Many of the states provide that milk containing less than the standard amount of fat is skimmed milk and therefore adulterated milk.

The federal government and those states which have adopted the federal standard are confronted with the necessity of condemning as skim milk rich Jersey milk from which a portion of the fat has been removed to permit the producer to compete with milk of lower but still of standard quality. Under many of the laws a Jersey milk containing 4 per cent of fat is just as much skimmed milk as one containing 0.4 per cent, while a Holstein milk containing 3.25 per cent of fat is pure, unadulterated milk. This anomalous situation will continue just so long as milk continues to be sold on the present irrational basis of so much a pound or quart regardless of its composition and its richness. The terms "adjusted" and "standardized" have been suggested to cover milks of the class above referred to, and the arguments of their advocates are well worthy of our consideration.

The prejudice against skim milk is apparent in some of our state laws. The great state of New York reaches the climax when it provides that milk from which any part of the cream has been removed is adulterated milk and then without the quiver of an eye-lash states that "all adulterated milk shall be deemed unclean, unhealthy, impure and unwholesome."

In a later section of the New York law we are presented with the anomalous situation of skim milk, that is "adulterated" milk, being "unclean, unhealthy, impure and unwholesome" in New York and Kings counties, that is in the cities of New York and Brooklyn, whereas the same product when sold in other counties in which it is produced, or in the adjoining county, may be "Clean, pure, healthy, wholesome and unadulterated." The Massachusetts law heads one section "Sale of Adulterated, Diseased or Skimmed Milk." The Iowa law classes together "Unclean, impure, unhealthy, adulterated, unwholesome and skimmed milk." Surely skim milk is a pariah among food products.

The fact remains that, in spite of laws and regulations, in both the official and the popular conception skim milk is milk from which most of the fat has been removed. It is this removal of fat, this apparent debasing of the product, that has brought upon skim milk undeserved and unintelligent opprobrium. It should hardly be necessary for me to make the statement, but to prevent any misunderstanding let it be clearly understood that neither I nor any other champion of skim milk wants it to be sold on any other basis than on its merits. Skim milk of course must not be sold as whole milk, or skim-milk cheese as full-milk cheese, or frozen condensed skim milk as ice cream. But here we have a valuable food product, a cheap source of animal protein in a peculiarly digestible form, a most valuable culinary adjunct, whose sale is discouraged in practically every state in the union, whose sale is prohibited under any conditions in the great cities of New York and Brooklyn, and whose sale when permitted is hampered by such restrictions as to discourage both the seller and the buyer of the product. The food commissioner of Wyoming in a letter to the speaker actually admitted that in his official capacity he discouraged the use of skim milk as much as possible.

It is a truism that fat is not the only valuable or even the most valuable, ingredient of milk. In normal milk the milk sugar exceeds the proportion of fat and the protein is only a little lower, and in skim milk of course the percentages of protein and lactose are higher than in the whole milk. And yet, in spite of the presence of these valuable food nutrients in an especially digestible form, the laws, the food officials and the public banish skim milk from the table and the kitchen to the

barn yard and would feed it to pampered calves, pigs and chickens.

At least 1,600,000,000 pounds of butter are made annually in this country and from this there are obtained about 28,000,000,000 pounds of skim milk and about 2,000,000,000 pounds further are obtained from cream and sold as cream, or 30,000,000,000 pounds annually of a useful, valuable, nutritious and digestible food the sale of which is discouraged almost universally by restrictive legislation.

For each 100 pounds of milk used in butter making there are 84 pounds of skim milk, containing on the average 2.85 pounds of protein, 0.25 pounds of fat and 4.28 pounds of milk sugar, so that our annual skim milk output would supply to us 1,025,000 pounds of protein, 90,000,000 pounds of fat and 1,530,000 pounds of milk sugar.

It has been pointed out that in Germany 25 cents will buy 538 food units in the form of beef, 552 in poultry, 1,614 in whole milk, 2,311 in buttermilk and 2,562 in skim milk, and yet with us this valuable product is largely calf food, pig food or chicken food. So great is the popular prejudice against skim milk as human food that in many localities it can be purchased only with extreme difficulty. For instance, in a recent Canadian inspection although the inspectors were instructed to take skim milk wherever offered for sale only one sample was taken in 367 collections.

Skim milk may be offered to the consumer in various forms: as the straight product itself, dried skim milk, condensed skim milk, skim milk cheese or as one of the various commercial casein preparations. Each of these is valuable in its own field. Skim milk as a beverage is not to be despised, if one can rid himself of his foolish pride against using a cheap food product; but perhaps its widest field of usefulness is for culinary purposes. In the usual mixed diet the required amount of fat is generally supplied by meat, butter, lard, etc., so that the deficiency of skim milk in fat is not of such great importance. Of all our food ingredients protein is the most expensive and the one most generally lacking in cheap meals, and this ingredient skim milk offers in an extremely cheap and digestible form. There are few instances in the kitchen where skim milk cannot be substituted for whole milk, and in certain cases the resultant product is of superior quality. It has been shown that its use in bread making increases the nutritive value of the bread, and not only this but British experiments have shown that it also increases the yield of bread from a given quantity of flour. Two hundred and eighty pounds of flour took up 175 pounds of water in mixing the dough and yielded 94 4-pound loaves, there being a loss of 71 pounds of water during baking. The same amount of flour took up 210 pounds of skim milk and yielded 110 4-pound loaves, the shrinkage being 50 pounds. Furthermore this water bread is said to sell for 10 cents a loaf, and the milk bread for 11 cents.

Skim milk is useful not only in bread making but also in the preparation of potato, celery, tomato, pea and corn soups; fish, lobster, clam and oyster chowders, bisques and stews; all kinds of quick biscuit, griddle cakes, cakes, etc.; rice and Indian puddings, custards, squash and pumpkin pies, chocolate, cocoa, sherbets, ices, and in a hundred and one different ways. In the case of cake, if the skim milk is sour so much the better as only half the acid leavening agent called for in the receipt will be required. In the older method of cream separation the resultant skim milk was liable to have acquired considerable age before reaching the consumer, and this perhaps explains its general ill repute. The use of the modern separator, however, in great measure has remedied this difficulty and the skim milk produced by that process is of distinctly better quality. It is generally held, and I believe quite properly, that skim milk is not a desirable food for infants because of its deficiency in fat and because of its lack of freshness. While the latter objection is not so tenable in the case of adults, a thorough cooking may as a rule be desirable, even under present improved methods of preparation.

As to the food value of this skim milk it may be stated that 2.5 quarts furnish the same amount of protein and nearly the same fuel value as a pound of round steak, and that two quarts have greater nutritive value than one quart of oysters, the oysters costing from 30 to 50 cents and the skim milk from 4 to 6 cents. Expressing the relation in calories per pound skim milk yields 170 calories or over half the amount supplied by whole milk. It yields about the same calories per pound as sea bass, black fish, codfish, buttermilk, oatmeal gruel, fresh string beans, beets, carrots and corn, oranges, strawberries and clam chowder, crabs and tomato soup; more than twice as many calories as round clams, celery, cucumbers, lettuce, pumpkin, rhubarb, asparagus, Brussels sprouts and muskmelons; and from three to four times as many calories as oysters and bouillon. Surely such a source of nutriment is not to be despised, and the argument for its use becomes even stronger when the question of cost is considered.

Without burdening you with further detailed figures, suffice it to say that at usual prices skim milk furnished protein more cheaply than any common animal food except salt fish; it is, however, a dearer product than most vegetable foods, but over these it has the important advantage of having no waste, requiring but little time for preparation and being more indigestible.

As an illustration of the nutritive and economic value of a combination of skim milk and bread, let me cite the comparison made in a Farmer's Bulletin of the U. S. Department of Agriculture between a lunch composed of bread and skim milk and an ordinary lunch as supplied by a restaurant. Eight oz. of bread and one pt. of skim milk yield 859 calories with 0.09 lb. of protein for 5 cents, while a lunch of 8 oz. of soup, 2 oz. of beef, 2 oz. of potatoes, 1 oz. of turnips, 3 oz. of bread, 0.5 oz. of butter and 1.5 oz. of coffee with milk and sugar yields about the same number of calories, 855, with 0.05 lb. of protein for from 15 to 20 cents.

The above simple lunch of bread and skim milk yields about one-third of the required daily nutriment at a cost of only 5 cents. In the penny luncheons supplied to Boston school children one of the successful combinations was skim milk, bread and butter. The value of skim milk in dietaries for large numbers of people, as for instance in public institutions, is evidently very great.

The second form in which skim milk may be used is in

the form of milk powder. There are two general methods of production (1) drying of steam-heated rotating drums, and (2) spraying the milk into a chamber through a current of warm air passing. The latter process has the advantage of yielding a product of greater solubility, without coagulation of the albumen or destructions of the enzymes. These milk powders, of course, may represent milks of different degrees of skimming. A typical partially skimmed milk powder shows water 5 per cent, fat 16, protein 34, ash 7 and lactose 38 per cent, yielding 1,957 calories per pound.

Skimmed milk powders on the other hand show water 3 to 14 per cent, fat 1 to 3.5, protein 29 to 36, ash 7 to 8 and lactose 44.5 to 55 per cent. A typical American skimmed milk powder analyzed by the speaker showed water 2.56, fat 2.23, protein 36.31, ash 8.10 and carbohydrates 50.80 per cent. This powder yielded 1,669 calories per pound at a cost of 25 cents. Aside from the convenience in the use of these milk powders in the home or in the camp, their keeping qualities and freedom from bacterial contamination still further emphasize their usefulness and value as food products. For some unknown reason my own state seems to offer a needless restriction which prohibits the sale of milk powders of all kinds except in original packages.

Skim milk cheese is another form in which skim milk may come into popular use. Undoubtedly in the past there have been grave abuses in the sale of skimmed or partially skimmed milk cheese as full milk cheese. This form of commercial dishonesty, however, should not cause us to lose sight of the great nutriment value of cheese of this sort. The requirements of many of the state laws are apparently designed to limit the sale of this product. The state of Washington considers any cheese containing less than 30 per cent of milk fat to be "skimmed cheese," and prohibits the sale of any cheese containing less than 15 per cent of milk fat, except certain specified fancy types. The makers of some of our cheese laws have failed to recognize certain insurmountable trade difficulties in the manufacture of certain varieties of cheese. In the manufacture of American cheese of the Swiss type, for instance, it is often impossible to use whole milk and obtain a product that can compete with the foreign article. In this instance a partially skimmed milk yields a superior product and yet this superior product under certain laws and regulations must be stultified by the label, "Skimmed Milk Cheese." Such varieties as Backstein, Brie, Camembert, Cottage, Edam, Gouda, Limburg, Issigny, Neufchatel, Parmesan, Sap Sago and Swiss are commonly, if not always, made from skimmed or partially skimmed milk. Just as in the case of milk itself, the various laws class as skimmed milk and milk containing from 0.10 to 3.00 per cent of butter fat, so the term "skimmed milk cheese" is made by law or regulation to cover such diverse cheese as one containing 3 and one with 30 per cent of butter fat. The terms, "one quarter," "half" and "three quarters skimmed" cheese have been suggested, and in the speaker's opinion the adoption of a nomenclature of this nature would help greatly in doing away with the confusion and injustice existing at the present time.

Condensed skim milk is still another commercial form in which skim milk may be purchased. In some states its sale is prohibited altogether, in others a label is required stating that it is not intended for infants' use, but in most of the states it may be sold under its true name. There is no reason why this product should not find the same wide use suggested for the uncondensed article. Analyses of the various brands show the expected variations in butter fat, ranging from less than 0.50 to over 5.5 per cent. Certainly this product has a valuable part to play in the economical feeding of our people, and restrictions as to its use should not be so prohibitive as to drive it from the retail market and limit its sale almost entirely, as at present, to confectioners, bakers and the ice cream manufacturers.

The last class of preparations from skim milk to which I shall call your attention is the caseine products. Earlier in this paper I spoke of the importance of animal albumen in the human dietary and the difficulty of relying on meat for the supply of this protein. A substitute for meat albumen in our daily ration is therefore highly desirable. The requirements for such a substitute are relative cheapness; it must be tasteless, inodorous and for most purposes of the character of flour; it must be free from micro-organisms, it must be capable of keeping for any length of time without undergoing alteration, and finally it must be suitable to and assimilable by the organism when taken in considerable amount.

Certain of the caseine preparations seem to offer such a substitute. Accordingly we find on the market in addition to ground caseine itself such preparations as Plasom, Nutrium, Sanatogen, Galactogen, Lactarine and other products of this nature. The great difficulty with most of the patented preparations is their expensiveness. Some of them are advertised in regular "patent medicine" style with the usual extravagant claims as to their curative and reconstructive powers. The user of these preparations should remember that whatever virtue they possess from the standpoint of nutriment lies in the caseine they contain, and the mere calling of caseine a fancy name and charging from forty to fifty times the price for which commercial caseine may be purchased, by no means warrant the testimonials which apparently flow so easily from the pens of novelists, poets, journalists, statesmen, and other persons of equally high scientific authority.

Secretary John B. Newman: I would suggest that Dr. Street write out a resolution which could be handed to the Resolutions Committee and considered in order that it may be brought before the convention inasmuch as the paper is read by title.

Dr. J. P. Street: I will do that.

Mr. Geo. L. Flanders: The bill that was introduced into our legislature, permitting the sale of skimmed milk in New York City, was one that defined the milk content, which was described as a milk containing so much milk fat, so much solids, the net water added, etc. That bill passed the legislature, but when it got into the Senate the Senator from New York state rose on the floor of the Senate—it was during the days when we have what we call culture rule, and one objection will stop the passage of a bill—he got on the floor and said he would stop the passage of the bill unless we made an exception of skimmed milk in New York City. He said if you do not do that and the bill goes through, the poor people on

the east side and other places will be sold skimmed milk invariably, so the exception was put in there, namely, "Providing, however, this shall not apply to the sale of skimmed milk sold as and for such in New York" and other counties. This has been on the statute books for the last twenty-five years. Several times it has been tried to be repealed. The people in New York seem to feel, a good many of them, that it would result in the poor people getting skimmed milk.

In connection Mr. Street's idea of enforcing certain rules might interfere with the rights of the state and be looked upon as interfering with home rule. A young graduate from the Agricultural College, from your college, conceived the idea that the law was unconstitutional, so he brought a test case to the Court of Appeals and the court held that a law which prohibited the sale of skimmed milk was unconstitutional on the ground that skimmed milk was a wholesome food product, and beyond the power of the Legislature to absolutely prohibit its sale anywhere within its limits.

President Jackson: If there is not any further discussion on the paper we will proceed to the business meeting. Is there any report from the Executive Committee, composed of Dr. Ladd, Mr. Frary and Mr. Soule?

Mr. G. G. Frary: No.

Mr. S. C. Dinsmore: It is a lot of work on the part of the President to be able to prepare a program for this section, and I think that is the reason we have often experienced difficulty in getting members to serve as President, and I am going to make a motion that the preparation of the program be left to the Executive Committee.

Motion seconded.

President Jackson: It has been moved and seconded that the preparation of the program for Section A be left to the Executive Committee. Any remarks? If not, all in favor of the motion will please signify by saying aye; contrary no. It is a vote.

We will now have the report of the Nominating Committee.

Mr. F. H. Fricke: The Nominating Committee desires to recommend the following named Commissioners to be nominated for the following offices:

For President, F. H. Stadtmueller; First Vice-President, S. C. Dinsmore; for Secretary, Jas. W. Helme; for Treasurer, Geo. J. Weigle.

On the Executive Committee: Dr. E. F. Ladd, North Dakota; G. G. Frary, South Dakota; A. M. G. Soule, Maine.

President Jackson: You have heard the report of your Nominating Committee. What is your pleasure?

Mr. R. E. Rose: I move it be approved and the nominees elected and that the Secretary be instructed to cast the ballot of the Association for the gentlemen named.

The motion was duly seconded and carried and Mr. R. E. Rose stated that he had cast the ballot of the Association for the nominees and the President declared them duly elected.

President Jackson: Is Mr. Stadtmueller in the room?

Mr. G. G. Frary: No, but he wished me to thank you.

Mr. Jones (Washington): I move that we extend the retiring President of this section a rising vote of thanks for the very effective manner in which he has handled the business of this section during the past year.

(The motion was seconded and carried by a rising vote of the convention.)

President Jackson: Gentlemen, I thank you. I also want to thank you all for the attendance at our sessions and the support that has been rendered. I can assure you I have enjoyed doing the work this past year. I firmly believe that the officers ought to be distributed among as many states as possible. Last year Rhode Island captured two offices, and I hope such a thing will never occur again.

If there is no further business the meeting of Section A stands adjourned. (Meeting adjourned.)

Official Proceedings

Section B—Association of Official Food and Drug Chemists

President—L. M. Tolman, Illinois.

Secretary—Dr. David Klein, Illinois.

Vice-President—W. W. Randall, Maryland.

FIRST SESSION, MONDAY AFTERNOON, AUGUST 7, 1916.

PRESIDENT BARNARD: Will the Association of Food and Drug Chemists be in order? I will ask the Vice-President, Mr. Taylor, to take the chair. (Mr. George H. Taylor assumed the chair.)

Chairman Taylor: The first subject on the program is the address of the President. I take great pleasure in introducing to you Dr. Barnard. He needs no introduction, however.

LABORATORY CONTROL OF FOOD INDUSTRY.

BY DR. H. E. BARNARD, INDIANA.

One of the largest and most successful canners and packers in the country recently said to me, "I have been packing foods for thirty years, and I have felt that I knew all that there was to know about the business, but I have made up my mind that I really don't know anything about it and I am putting in a laboratory that I may learn what I am doing." His statement, or confession, is a good illustration of the present viewpoint of the food manufacturer.

Fifteen years ago the young chemist either turned to teaching or looked for work in some fertilizer factory where laboratory control was required by reason of fertilizer legislation. Very few chemists found an opportunity for work in the food industry, and what little investigation was carried on was for the most part done from time to time by the consulting chemist, who never came in close touch with the industry except as certain features were brought to his attention.

With the passage of State and Federal legislation, and especially the latter, the food industry was confronted with the appalling fact that it could not continue in business unless it produced goods that complied with the laws and standards, and since the arbiter of the law is the chemist whose analyses determine purity or adulteration, the demand for the work's chemist who could keep products up to standard was largely increased. The success of these chemists has been surprisingly great, not only have many of them made decided improvements in the character of the goods manufactured, but in some instances they have been able to meet food standards with sophisticated goods so skillfully that only occasionally have their employers fallen into the clutches of the law. I don't believe there are many chemists who find their field of work in such a direction, and I am sure that the men who class themselves food chemists appreciate the very great opportunity they have of serving their industry and at the same time serving the consumer.

As the work's chemists got in close touch with their industries they saw always opportunities for improvement in quality, reduction of waste, regulation in the purchasing of supplies, indeed they made their services invaluable. That this is true is fairly shown by the fact that laboratories starting in with one analytical chemist now have half a dozen, and the analyst

has been succeeded by the chemical engineer, whose work is not confined to the routine of the laboratory table, but who, in a large measure, is responsible for the operation of the factory.

Because of the entry into the industrial field of trained chemists it has been possible for manufacturers to keep in closer touch with the authorities than before, for the chemist who wishes to do his work well is not only concerned in turning out analytical reports, but he is vitally interested in knowing that the reports mean something, that is, that they definitely establish conformity to standard and the absence of injurious or tabooed ingredients.

As the lawyer is employed in drawing up papers of incorporation, investigating titles, and determining legal points, so the chemist is the technical advisor of the manufacturer on all points having to do with the food laws, and his responsibility is so great that his services have been more and more appreciated.

At the present time most of the large industries of the country maintain their consulting laboratories to which are referred not only mooted questions, controversies and complaints, but highly technical problems and research along unexplored lines, the solution of highly complex problems that have no present value, but are, in fact, of the utmost importance. Such chemists, in well equipped laboratories supplied with every convenience of apparatus and officered by competent assistants, are actually revolutionizing, and I use the word advisedly, the methods and the products of their industries. As a concrete example, look back to the condition of the canning factory five or six years ago, a business developed in the majority of cases by the importunities of salesmen of canning factory material and apparatus, carried on by the co-operative organizations of farmers who had absolutely no training in their work, and whose success or failure as canners depended upon their ability to sell their output at a slight advance over the cost of production.

That such factories were frequently unsuccessful was attributed not to a failure to run the business properly, but to a shortage of raw material or an overstocked market. Knowing nothing of sanitation, moulds, yeast spores or bacteria, the product of the factory was so prone to spoilage that preservatives were used to supplement imperfect sterilization. When preservatives were forbidden, witness the chaotic condition into which the industry was thrown.

Forced in the defense of their business, as they firmly believed, to defeat food legislation, State and Federal laws were passed in spite of violent opposition. When the laws were finally passed, recall the efforts made to render them inoperative. Cases brought in 1908 in Indiana have but recently been closed. In the years since they were filed so great a change has taken place on methods of manufacture and indeed of the viewpoint of the manufacturer, that he no longer opposes legislation or spends money fighting laws already enacted, but anticipates regulation and counts the supervision of his industry by State and Federal authorities as a positive asset, not only non-injurious, but actually of great value to his industry.

For instance, the canner of tomato products has by bitter

experience learned that spoilage is due to lack of care, and since the Federal Government began to count bacteria, moulds and spores, has himself come to appreciate the necessity for similar information, not after the goods are on the market, but before they are canned or bottled. And so it is that every canning factory, indeed every food factory, finds it absolutely necessary to employ an expert whose daily reports pass or condemn the product.

The chemist has come into his own. In his hands is placed an enormous industry, the most important of all industries, that of supplying food for the hungry world. The astonishing development of his field of work is but an indication of what the future will offer. The confidence of the public and of the manufacturer in the chemist is in no small degree due to the popularizing of his efforts.

A few years ago a chemist was a strange and unknown being, occasionally called upon to testify as a toxicological expert or give weird lectures with liquid air. The chemist of today is as well established in the community as the physician or lawyer, and his professional standing is, I believe, not only comparable, but indeed superior to those of the other learned professions.

How can this Association of Official Food and Drug Chemists profit by these conditions? At the present time the food chemist finds his work covered by three organizations, the food section of the American Chemical Society, the Society of the Official Agricultural Chemists, and our Section of the Association of Food, Drug and Dairy Officials. Membership in the A. O. A. C. is reserved to official chemists, in our Association to chemists connected with state control work. The only opportunity for the work's chemist is in the food section of the American Chemical Society.

We have endeavored to crystallize the interest, more or less latent, but nevertheless present in all food chemists in their special field, in such a way that those officially concerned with the chemistry of foods may find their best opportunity for an expression of their ideas or for the presentation of papers in our meetings. We have been successful to a moderate extent. To say more would be an unfair claim.

The important thing about our section meetings is not the papers presented, but the opportunity the section gives to the food control chemist to go to the convention where he may meet the officials of other states and other departments. I have felt that our section meetings gave chemists who, in too many instances, were not sufficiently close to the head of the department to make attendance at the annual convention possible except on special occasions a better chance to plan for the annual meeting if they could at that time be given an outlet for their year's work. This section has provided the outlet.

There is a feeling, however, and I believe the feeling is growing, that there are too many demands placed upon the food chemist for attendance at conventions and in the preparation of technical papers, and it has been suggested that our work as chemists would not suffer if our papers were presented, as they used to be, before the general convention and less effort were expended on continuing the work of our food section.

This is a matter which properly should be discussed and determined by the members of the section. I refer to it merely because of the feeling I have had for some time that food officials, even though their work is executive and regulative, are sufficiently interested in the work of their chemists to welcome them as an integral part of the parent Association.

The food chemist has taken his position among the constructive workers of the industrial world, and of him the future will demand much. Let it never be said that the men who make up our Association have failed to grasp their opportunity.

(Dr. Barnard resumed the chair.)

President Barnard: Before we proceed to the next number on the program, may I say that the value of the papers is very largely determined by the character of the discussion which follows their presentation. I feel that the author who reads them will welcome in every instance a critical discussion of his work, and I am sure that the value of the papers to us will be greatly enhanced by an active discussion of the technical features of the addresses. It is not possible to discuss a published paper, but it is possible to discuss it when it is given, as they will be given this afternoon, and I therefore urge you to co-operate with the reader by a full discussion.

The first paper of the afternoon will be presented by L. E. Sayre of the University of Kansas, who will discuss "The Pharmacopoeia IX of the United States and the New Standards Contained Therein." I take great pleasure in introducing Mr. Sayre.

PHARMACOPOEIA IX OF UNITED STATES AND ITS NEW STANDARDS.

BY PROF. L. E. SAYRE.

Mr. President and Gentlemen: It is becoming more and more apparent to those who have the responsibility of directing and executing the provisions of the Food and Drugs law that authoritative standards—standards that may not be questioned by legal authorities—are absolutely essential.

In the recent case of the United States vs. Thomas and Taylor Spice Co., where the standards promulgated in Circular 19 were considered by the court as unauthorized, we had a surprising exhibition of an alleged weakness, a weakness not found in the standards themselves, but one of a very unexpected kind. No matter how valuable the standards in Circular 9 are, they were shown to be subject to legal interference unfortunately.

No matter what legal status they may finally come to have, it is evident from our personal experience with these that we have come to appreciate the value of those of the United States Pharmacopoeia in that they seem to have the full force of statute authority.

In view of this fact, it is fortunate that the new pharmacopoeia (and National Formulary) will be quite inclusive in its standards for most every kind of drug and preparation commonly used in medical and domestic practice in the treatment

of disease. There was on the part of certain members of the Committee on Revision a strong effort made to greatly reduce and restrict the number of drugs and preparations, but others regarded the Pharmacopoeia as a representative and democratic book, not one arbitrarily setting forth the ideas of a few specialists, who would confine remedial agents to those they find worthy of recognition.

Consequently it was made as inclusive as possible, taking in the drug of the country as well as the city practitioners and all drugs recognized as a remedy and dispensed as such. The Pharmacopoeia is not a text book on therapeutics, but mainly a book of standards. Notwithstanding the efforts of the conservative element the number of crude drugs has been perceptibly reduced and so has the number of preparations of them. Organic and biological products have been increased.

CHANGES IN THE STRENGTH OF THE MORE IMPORTANT PHARMACOPOEIAL SUBSTANCES.

These may be shown by taking up in alphabetical order the more important of the alkaloid products.

Aconite. While the former Pharmacopoeia required 0.5 per cent of aconitine, the present Pharmacopoeia requires not less than 0.5 per cent ether-soluble alkaloids. Biological assay is recommended.

The Fluid Extract of Aconite which was .4 Gm. to 100 mls is now .45 to .55 Gms.

Asafoetida has been changed from 50 per cent of alcohol soluble constituents to not less than 60 per cent of alcohol soluble constituents.

Cannabis, to which there was no assay given, is now assayed by a biological process.

Cantharides, formerly no assay, the U. S. P. IX requires the drug to contain 0.6 per cent of cantharidin.

Cinchona. Formerly this bark was required to contain at least 4 per cent of anhydrous ether-soluble alkaloids. The present Pharmacopoeia requires 5 per cent of total alkaloids.

The Fluid Extract of Cinchona is required to contain 4 to 5 Gms. of the alkaloids from cinchona in 100 mls.

The Tincture of Cinchona has been changed from .075 Gms. in 100 mls to .99-1.1 Gms. of the alkaloids from cinchona.

The Compound Tincture, which was not formerly assayed, is now required to contain 0.45 to 0.55 Gms. of alkaloids from cinchona in 100 mls of the tincture.

Digitalis. A biological assay is recommended.

Guarana. The percentage of caffeine is changed from 3.5 per cent alkaloidal principles to not less than 4 per cent of caffeine.

Hydrastis. The alkaloidal content has not been changed from 2.5 per cent, but the present Pharmacopoeia instead of saying that this shall be hydrastine requires that it be ether-soluble alkaloids. The glycerite is required to contain 1.12-1.137 of ether-soluble alkaloids of hydrastis.

Jalap was formerly required to contain not less than 7 per cent of total resin, of which not more than 15 per cent should be soluble in ether. Now, the standard is not less than 7 per cent total resins of jalap.

Malt. The Eighth Revision required no assay. It is now required to be capable of converting five times its weight of starch into sugar.

Nux Vomica has been changed from 1.25 per cent strychnine to not less than 2.5 per cent of alkaloids of nux vomica.

Opium has been changed from 9 per cent crystallized morphine to not less than 9.5 per cent anhydrous morphine. The powdered opium is changed from 12 to 12.5 per cent crystallized morphine to 10 to 10.5 per cent anhydrous morphine.

Pilocarpus. The Eighth Revision required .5 per cent of alkaloids, while the present Pharmacopoeia requires .6 per cent of the alkaloids from pilocarpus.

Podophyllum has been changed from no assay to not less than 3 per cent of resin.

Squill, formerly no assay, now a biological assay recommended.

Strophanthus is treated the same way.

The standard for drug preparations such as the tinctures, fluid extracts and extracts with few exceptions have been changed in about the same proportion as the standard for the drug itself has been changed.

The globular product, such as Dried Thyroid Gland, which formerly was not assayed, is now required to have from 0.17 to 0.23 per cent of iodine in thyroid combination.

The Thymol Iodide has been changed from 45 per cent to not less than 43 per cent of iodine.

The Dried Suprarenal Gland, which was not formerly assayed, is now required to have from 0.4 to 0.6 per cent of epinephrine.

One of the checks which the U. S. P. had introduced for the detection of adulteration and admixture of foreign material is a statement of the limit of ash content, which will be referred to later.

Since the Pharmacopoeia has been authorized by statute in the Food and Drugs Law, any revision of standards would be of great importance and many of these revisions require delicate adjustment of what is considered as ideal and what as practical. In deciding upon the standards the Committee of Revision was advised to make allowances for unavoidable innocuous impurities or variations due to the particular source or mode of preparation or to the keeping properties of the several articles.

In the construction of suitable standards for crude drugs, in the powdered form particularly, it is to be regretted that so many unfamiliar microscopical and histological terms had to be employed, but in the identification of crude drugs in the powder it is impossible to cover this subject without using these unfamiliar words and expressions.

While the average pharmacist is unable to use these tests as a rule, he has the consolation that experts are able to protect the market through existing laws by the use of this microscopical phraseology. Some of these drug powders require, for microscopical description, from 150 to 300 words. In this respect there is a notable difference between U. S. P. VIII and IX.

Associated with the microscopical standards is found often times, such as in the case of colocynth, helpful attendant tests. For example, the U. S. P. standards, after requiring that the

powder of the fruit should be deprived of the seeds, not more than 5 per cent of which should be present, and after giving the microscopical description which will aid in the detection of excess of seeds, an accessory test is added which is that the powder, when extracted by petroleum benzene, should not yield more than 2 per cent of fixed oil.

Many of these accessory tests aid in the identification as well as analysis of the drug, as, for example, the emodin test is introduced in such drugs as rhubarb which is added after the description of the powder and reads as follows:

Boil 0.100 Gm. of powdered rhubarb with 10 Cc. of an aqueous solution of potassium hydroxide (1 in 100), allow it to cool, filter, acidulate the filtrate with hydrochloric acid and shake it with 10 Cc. of ether; on standing, the ethereal layer should be colored yellow. On shaking this ethereal solution with 5 Cc. of ammonia water, the latter should be colored cherry red (presence of emodin) and the ethereal layer should remain yellow (presence of chrysophanic acid).

One of the important phases of standards for the crude drug in the new Pharmacopoeia is the list of the amount of foreign matter and in many cases very specific statements are made as to such a limit, as, for example, in hydrastis, "That it should be without the presence or admixture of more than 2 per cent of the stems, leaves and other foreign matter." Grindelia is now not permitted to have more than 10 per cent of stems and foreign matter, etc.

A valuable check on content of foreign matter is found in the determination of the ash, as before referred to. Perhaps no pharmacopoeial revision in any country has had such a careful survey of the ash yield of drug powders. After the determination of the yield, the committee has been very liberal in erecting a standard. It seems to the writer quite more liberal than the federal standard.

The ash content of about 120 crude drugs has been carefully made and recorded. This will serve as a valuable means for control in the execution of the Food and Drugs Law. Among the drugs of high ash content are the following:

Belladonna Leaves, not exceeding 20 per cent (root, 7 per cent); Cannabis, 15 per cent; Colocynth Pulp, 15 per cent; Digitalis, 15 per cent; Granatum, 16 per cent; Hyoscyamus, not exceeding 30 per cent; Sassafras, 30 per cent; Valerium, not exceeding 20 per cent, etc.

Among those of low ash content are Nux Vomica, 3.5 per cent; Physostigma, 3 per cent, and several rhizomes (about 3 per cent). The ash insoluble in hydrochloric acid is stated in some cases. Considerable range is given to Ipecac (1.8 to 4.5 per cent). This range is probably given in order to include or accommodate the different varieties of root from different soils.

TESTS, GENERAL AND SPECIFIC.

In Part II of the U. S. P. there is abundant material valuable to the Food and Drug Chemist. Besides minute direction for preparing reagents, including diagnostical reagents, clinical tests, volumetric solution, indicators, etc., there is supplied a very satisfactory list of general tests. These have been greatly multiplied since the last revision and detailed descriptions immensely improved. Prominent among these general tests and determinations are those for the following:

Arsenic, heavy metals; electrolytic determinations; assay for chlorides; bromides and iodides; assay for alkali salts of organic acids; determination of ash; iodine value; absorption value; saponification value; acid number of resins; determination of crude fiber; determination of volatile extractives soluble in ether; determination of alcohol in official preparations with list of alcoholic percentages; melting points; boiling points; congealing points; solubilities; gasometric estimations; optical rotation; refractive index and biological assays; process of sterilization; etc., etc., all of which will invite at least unification in analytical determinations.

PROXIMATE ASSAYS.

A most valuable addition to analytical processes is found in the specific directions for assaying alkaloidal drugs, which often yield discordant results on account of different operators adopting different details in carrying out the assay process. The U. S. P. IX introduces specific directions as to detail to avoid this discrepancy of results in, for example, such specific directions as the following:

(1) "In all assays the extraction should be continued until 0.5 mil of the acid washings shows only a very faint cloudiness on the addition of a drop of mercuric-potassium iodide T. S., or, in the case of caffeine and colchicine, on the addition of a drop of iodide R. S."

(2) "When the acid solution of the alkaloid is made alkaline and shaken out with several successive portions of the appropriate immiscible solvent, the volume of the latter to be used in each operation is not less than half that of the acid solution, and the operation must be repeated as long as any alkaloid is extracted by the immiscible solvent."

To test this, evaporate one mil of the last extraction and dissolve the residue in a few drops of diluted hydrochloric acid; the resulting solution should show not more than a very faint cloudiness on the addition of a drop of mercuric-potassium iodide T. S., or, in the case of caffeine and colchicine, on the addition of a drop of iodine T. S.

This second part of the volume embodies the latest established methods in chemical and physical determinations and shows the most advanced thought of the Committee of Revision.

It is well known that the term cubic centimeter (c. c.) has been displaced by the term mil (plural mils) and that the determination of the atomic weights is now based on oxygen—16 instead of hydrogen—1, which brings the work into harmony with other standard authorities and pharmacopoeias.

NOTES ON EXAMINATION OF HOMOGENIZED CREAM FOR BUTTER FAT.

BY W. M. COBLEIGH, MONTANA.

At the Rochester meeting of the Laboratory Section of the American Public Health Association H. B. Baldwin read a

paper on the subject of homogenized milk and cream. He stated that "Experiments are needed to show the best methods of fat determination in homogenized products." He cited one reference (1) which gives a comparison between the Adams and Gottlieb methods, the results of which were not entirely satisfactory.

Not enough work has been done in preparing these notes to supply the need above noted. The following statements are tentative and preliminary to more work which is in progress.

In a series of fat determinations in a large number of ice cream samples it was found in a few cases impossible to obtain any evidence of a fat layer by the Babcock method modified for ice creams. It was noted that the samples with this behavior had a different texture than the other samples for which the Babcock method gave satisfactory results. It was then learned that these creams were made from a homogenized product.

The Paul (2) extraction method was used then with 100 gram samples and it was found that each sample that gave no fat layer by the Babcock method contained the legal amount of fat.

To obtain a procedure that would be better adapted to routine determination than the Paul method it was decided to seek some modification of the Babcock method that would effectually break up the emulsion and make it possible to liberate the fat by acid treatment in the usual way. This was done by borrowing from other methods of determining fat, the idea of first treating the sample with ether in a Babcock bottle. A number of trials of different modifications give considerable basis believing that the following procedure will give you satisfactory results.

Weigh the sample of cream in a Babcock bottle in the usual way. To liberate the fat from the emulsion add about one-half gram of borax and from 5 cc. to 10 cc. of ether and centrifuge for two or three minutes. Let stand three to four hours and then heat gently to volatilize the ether. Add sulphuric acid (1.83) until the solution turns a light coffee color and then proceed as in the usual Babcock method. In some cases better results were obtained by making the final solution with hot dilute sulphuric acid (1.1) instead of hot water. In general the results by this method were on the average 0.2 per cent to 0.3 per cent higher than by the Paul method.

There is some evidence to indicate that when a mixture of foreign fats are used in the homogenized product, the borax is quite helpful in breaking up the emulsion. In some samples the ether treatment alone failed to liberate the fat and the combined use of borax and ether appeared to be necessary.

In one series of ice cream samples examined there was considerable evidence to indicate that the same were made from mixtures of ordinary cream and a homogenized cream. In the analysis of these samples by the Babcock method it appears quite likely that the homogenized cream was not separated and that the reading was due to the fat layer obtained from that portion of cream that had not been homogenized. By treating such samples with borax and ether the fat reading would more nearly include all the fat present.

Inasmuch as homogenized cream is manufactured under a variety of conditions the above statements apply only to the samples examined. Further study will be given to the problem.

CONTRIBUTION TO KNOWLEDGE OF CHEMICAL COMPOSITION OF FRUIT EXTRACTS.

BY W. S. LONG.

Mr. Chairman and Gentlemen: This work was started with the view of obtaining data which would serve as an aid in the identification of commercial fruit extracts. This seemed desirable in view of the lack of data and of the consequent lack of definite standards for products of this class. It seemed necessary, also, in view of the fact that samples of commercial fruit extracts were being sent to this laboratory with increasing frequency, with requests for information as to their purity.

It is hoped that these experiments will be of value as a slight contribution to our knowledge of the composition of fruit extracts and will assist in their identification. A method based on the separation and actual identification of the fruit ethers, if practical, would no doubt be more satisfactory. Some references to work having a bearing on the subject are as follows:

(1) "The Differentiation of Natural and Artificial Fruit Essences." (A. Landolt, Chem. Ztg. 35, 677-8.)

A number of artificial fruit essences prepared in the laboratory and a number of natural fruit flavors prepared by macerating the fresh fruit with alcohol or sugar were compared. Determinations were made as follows:

Specific gravity of the essence, specific gravity of the 80 per cent distillate, ether content of distillate and volatile acids. Raspberry, strawberry and lemon flavors were examined. By this procedure Landolt was able to distinguish readily between natural and artificial essences.

(2) "The Differences Between Fruit Essences and Artificial Fruit Esters." (Werder, Schweiz. Wochshr. 49, 385-6) This work consisted in the examination of a number of natural essences and artificial substitutes, by determining (a) the density of the essence, (b) density of distillate, (c) ester content and (d) volatile acids. In artificial strawberry essence, valeric, butyric and acetic acids were found, while the natural essence contained propionic and acetic acids.

(3) "Composition of Fruit Juices for the Year 1907." (Z. Nahr. Genussem. 15, 129-60.) This included the determinations of solids, ash and alkalinity of ash of a large number of samples of partially fermented fruit juices, including raspberry, strawberry and cherry.

(4) "Contributions to the Knowledge of Fruit Juices." (K. Windisch and P. Schmidt. Z. Nahr. Genussem. 17, 584.) An exhaustive discussion of the preparation, storage and analysis of fruit juices. Tables are given, showing the solids, ash and alkalinity of ash of various fruit juices.

(5) "Permanent Fruit Extracts." (Thoms. Ger., pp. 285-304.) Extracts containing the aromatic substances and ferments unaltered are made by dialyzing in cold chambers and evaporating to desired density. On dialysis aromatic sub-

stances and ferments do not pass through the membrane, while acids do pass through in part.

The tables following contain the data obtained upon fifteen samples of commercial fruit extracts, three commercial imitation fruit extracts and twelve fruit extracts made in the laboratory. These laboratory made extracts, with one exception, were prepared by macerating the whole fruit, finely ground, for a week or more, with the extractive agent, then pressing out in cheese cloth and filtering through filter paper. In the case of one blackberry extract the dried fruit was treated with an equal weight of dilute alcohol for two weeks, pressed out and filtered as above.

The extracts examined, eliminating from consideration the imitation products, possess, as might be expected, some characteristics in common, namely: An ash content of some magnitude, a larger proportion of soluble than of insoluble ash, an alkalinity of the soluble ash higher than that of the insoluble, a total alkalinity of from two to three times that of the insoluble ash and a percentage of ash in total solids varying within rather narrow limits. As might be expected, these extracts differ but little in composition from the fruit juices themselves. Considering the individuals of the class, it will be noticed that each gives a characteristically colored precipitate with lead acetate (normal or basic) and with alum. The pineapple, cherry, blackberry, and raspberry extracts agree very closely in the percentage of ash in total solids, while the extracts of strawberry show much higher results in this respect. The use of sugar and glycerol in connection with alcohol as extractive agents changes very little the analytical properties of the extracts. From the standpoint of flavoring property, very little can be said in favor of these extracts. Experiments carried out under the direction of the head of the Department of Home Economics of the University of Kansas revealed the fact that these extracts are practically worthless as flavoring agents for pastry products. These results were anticipated from the fact that, with the exception of the pineapple product, it is practically impossible to recognize the extracts through taste and smell.

SECTION B—SECOND SESSION, TUESDAY EVENING, AUGUST 8, 1916.

President Barnard: A perfectly good introduction to Prof. Currie's paper yesterday was spoiled by his absence. We are, however, glad that he is here this evening to attend the meeting and I take great pleasure in introducing to the chemists of Section B, Prof. James N. Currie, of the Bureau of Animal Industry, who will discuss "The Relation of Composition to Quality of Cheese."

Prof. James N. Currie: I wish to thank everybody that is responsible for letting me talk out of turn.

RELATION OF COMPOSITION TO QUALITY OF CHEESE.

BY JAMES N. CURRIE, WASHINGTON, D. C.

Mr. President, Ladies and Gentlemen: In discussing this subject I realize that the members of this Association are chiefly concerned in enforcing the Food and Drug Laws of the various states. Chemical data are our usual reliance in proving a product and tables of composition are regarded by those charged with food control as of interest mainly in determining whether a product is an honest or a fraudulent one.

In this paper I wish to point out some of the influences of composition in determining not only the physical properties of a cheese curd, but also in regulating the biological processes concerned in the ripening.

Water is probably the most important factor from the standpoint of its influence on the development of bacteria moulds and yeasts in cheese. This, however, applies not only to cheese, but also to many other food products. The millions of bushels of our cheese crops are preserved by dessication. Yet we hardly stop to consider that this is a process of lowering the water content below the point that will sustain bacterial and mould growth.

The limit for water content between which many food products will keep or spoil is exceedingly narrow. Not only does the water content determine whether there shall be a growth of micro-organism, but it also determines the varieties that will grow, for these organisms, like our higher plants, differ greatly in respect to resistance to draught. A cheese having thirty per cent water will have a very different flora than one having forty per cent water.

In cheese making the amount of water or whey determines the quantity of milk sugar which remains in the cheese and also the strength of brine when the cheese is salted. These both exert a decided influence on the subsequent development of the flora. The milk sugar in nearly all cheese is quickly fermented to lactic acid.

Recent studies of many investigators have emphasized the importance of acidity, or more properly speaking, of hydrogen ion concentration in regulating bacterial growth. Aside from this influence on hydrogen ion concentration, the lactic acid may undergo a variety of fermentations, giving rise to volatile acids which exert a marked influence on flavor.

The salt factor has proven especially important in the study of the fancy cheese. Biologically speaking the cheese acts approximately as a brine in which the salt is in solution in the moisture of the cheese. That is to say, a cheese containing five per cent salt and fifty per cent water will act as a ten per cent brine.

The average departs only fifteen per cent from either the maximum or minimum. Numerous Roquefort cheeses have been analyzed by the writer and with only one or two exceptions have they failed to fall within the limits of Dox's table. This cheese contains about forty per cent water and four per cent salt. It therefore acts biologically similar to a ten per

cent brine. Low salt or excessive moisture alters the strength of the brine and is very quickly reflected in an abnormal flora and a resulting off flavor. Success or failure with this cheese has depended very largely on proper salting.

The uniformity in composition of this French cheese is in marked contrast to the lack of uniformity in our American cheddar. Published analyses show a variation in moisture content from twenty-five to forty per cent. In some cases this may be due to partial skimming, but analyses of "full cream" cheddars show almost as great variation in moisture content. Published analyses of Canadian and English cheddar show much greater uniformity of composition. This is one reason for the greater uniformity of quality and the excellence of these products.

Three of the cheeses most common on our markets and all made in this country are Cheddar, Brick and Limburg. There are no essential differences in the methods of manufacture to give these cheeses their characteristic flavors except in the amount of whey pressed out of the curd.

Cheddar contains about thirty-three to thirty-eight per cent moisture, Brick thirty-six to forty-two and Limburg thirty-eight to forty-four. No limits of composition have been set for these cheeses by the Food Commission nor have the cheese makers standardized their methods, and consequently there are no sharp distinctions in flavor. A dry brick may have a Cheddar flavor and texture and a wet brick a Limburg flavor and texture.

The texture of the cheese, however, is very largely determined by the amount of fat incorporated with the curd. The importance of this factor is well illustrated in Swiss cheese. The Swiss makers in Switzerland and also in this country know that the best cheeses are made from milk containing about 2.8 per cent of fat and where the law permits it the milk is lightly skimmed to about this standard.

The cases cited will serve to illustrate the writer's point, namely, that the first step toward securing uniformity and excellence in quality must be the adoption of correct standards of composition which in most cases will be found to vary within remarkably narrow limits.

It is of interest in this connection to review briefly the standards set for cheese by the various states. The standard, fifty per cent in solids, has been adopted by twenty-seven states, forty-five per cent fat in solids by two states and thirty per cent fat in solids by two states. Three states have adopted thirty per cent fat based on total weight of cheese. Other states have no fat standard. These standards have obviously been fixed with the object of preventing skimming and under the impression that cheese means only cheddar cheese. A standard based on fat in solids takes no account at all of the water in the original product, nor does it take account of the fact that some varieties of cheese, notably Swiss, can not be successfully produced from whole milk.

There was a time when almost no cheese but American cheddar was made in this country, and it still constitutes about three-fourths of the total output of the cheese factories. Still about fifty million pounds of Swiss, ten million pounds each of Brick and Limburg and increasingly large quantities of other fancy cheeses are produced annually.

The utilization of casein as a food product instead of glue and paper sizing is one of the largest problems confronting the dairy investigators. This problem if solved would reduce the meat bill and the high cost of living for all of us. To me it appears that the most likely solution of this problem lies in the development of fancy cheeses, especially of the skimmed or partially skimmed varieties. No one claims that a better cheddar cheese can be made from skimmed than from whole milk, and food laws should very properly prohibit skimming where this cheese is concerned.

But it is unfair to impose on other varieties of cheese limits of composition which should apply only to cheddar, or a form of branding which would create an unwarranted prejudice in the mind of the consumer against any variety of fancy cheese.

To sum up the arguments presented: The lack of standards of composition is largely responsible for the great diversity of quality in such cheeses as Cheddar, Brick and Limburg. A standard based on fat in total solids prevents skimming but does not produce a cheese of uniform composition and quality. A water standard in conjunction with a fat standard would exert a far reaching influence in producing this very desirable result.

Therefore, to improve the quality of our cheddar and to encourage the manufacture of cheese it seems to the speaker that most is to be accomplished by defining the more important varieties of cheese according to the method of their manufacture and establishing correct standards for their composition. These cheeses should certainly include Cheddar and Swiss and possibly Brick and Limburg and other varieties as they assume greater importance in our dairy manufacturing industry.

President Barnard: Prof. Currie's paper is now open for discussion.

Mr. W. W. Randall: Is it not true that a very great deal of attention has been given in France to the development of certain brands of bacteria for the production of this specific flavor that is connected with individual cheeses? Is it not the case that special cultures are required to produce the peculiar characteristic effects?

Prof. James N. Currie: Well, I would say off hand that a great deal of attention has, in fact, been given to it for this reason: You take Swiss cheese and it is made in an extremely primitive way. They hang the kettle out over an open fire and stir it until they think it is about the right temperature, just like the colored folks in the South make biscuits, putting in about enough when they think it is about right and letting it go at that. That is very largely the way Swiss is made. The manufacture has not been very well standardized, and Roquefort is not made as most of our cheese is in our centralized factories. It is made in little factories all around over a section of the country.

That, I would say, would tend to discourage the use of highly developed cultures, or paying a great deal of attention to that.

The point that seems to me to be of most interest in this connection is that we shall no longer think of cheese as our

American cheese, the only cheese that is meant when we talk about cheese in our food laws, because as I pointed out, ordinary milk very seldom falls below three per cent. Our milk contains a little bit too much fat, but at the same time if that Swiss cheese, the best that you can make of it goes into the market, it should not have to go in under the brand of "Skimmed" or "Partly Skimmed" cheese, which, in a number of the states, it would now, if they adhered strictly to the laws.

Minnesota and Wisconsin have a five per cent fat and total solids provision.

President Barnard: Dr. Bigelow, Chief Chemist of the National Canners' Association, is going to tell us about the Inspection of Canned Foods. I take great pleasure in introducing Dr. Bigelow.

INSPECTION OF CANNED FOODS.

BY W. D. BIGELOW.

Mr. President: The first principle in the inspection of any article is that the inspector or analyst should be thoroughly familiar with the normal product. Methods of analysts and data for the interpretation of analytical results should always be standardized by the normal product.

Iron and steel analysts standardize their analytical technique by the examination of standard samples of known composition. That practice is also followed in colleges and universities where instructors often procure for their students samples that have been analyzed by experts in the various fields. The same practice must be observed in the examination of canned foods. An analyst who is not thoroughly familiar with a normal product is entirely incompetent to determine whether or not a given sample is normal.

The examination of canned foods may be undertaken to assist in controlling the character and quality of the product, to establish its commercial value and grade; to fix the responsibility for defect in food or package; or in connection with the enforcement of food laws.

Whatever the ultimate object of the work, the immediate purpose is the same—to ascertain as exactly as possible the nature, character and quality of the product under examination. This includes a knowledge of the raw product and method and conditions of manufacture as far as they affect the character and quality of the finished article. In packing and labeling a product, therefore, the canner needs the same information that Federal and State officials need in enforcing the law.

External Appearance of the Can.

In the examination of canned foods, the external appearance of the can should be carefully noted. If the can appears "flat," as it is called in the industry (i. e., if the ends are concave), it should be "knocked" with considerable force on one end on a substantial table or block of wood to determine whether a suitable vacuum exists. If the lower end of the can does not remain concave on being struck in this manner, the vacuum in the can is not as great as it should be. The temperature at which the can is examined must be considered in this connection, for it is obvious that if the temperature of the contents were a few degrees higher the can would be a springer.

A lot of cans may be springers in the summer and the ends concave the following fall and winter. They may be springers during a hot wave and "flat" in the same location the following week. Samples of springers sent to the laboratory by a packer during a hot wave have reached us "flat" (with the ends concave) a couple of days later because the weather was cooler. The fact that a can does not have a good vacuum or even that it has bulged ends means nothing in itself, but may be significant when considered in connection with other data.

Swells and Springers.

Cans whose ends bulge ever so slightly are not merchantable and their sale to consumers should not be permitted. The bulged end is a reasonable "warning sign" and should be so regarded. Yet that condition does not usually mean decomposition when found in the retail trade. Very frequent and very serious errors have been made in the inspection of food by assuming that all "swells," as they are popularly termed, are due to decomposition. With non-acid foods, such as peas or corn, swells are usually due to decomposition, be the amount of swelling ever so little. On the other hand, spoilage rarely occurs with acid fruits unless the can be leaky. In this class of products, when the can is well made and tight, swelling is almost invariably due to hydrogen set free by the action of the fruit acid on the metal of the container. The amount of hydrogen liberated in this manner depends to a certain extent on the conditions of storage. It is influenced little by the method of canning, or by conditions within the control of the packer. A shipment of canned fruit may leave the packer in perfect condition and yet, owing to improper storage, the cans may become springers within a few months or even within a few weeks. A single shipment of California canned fruit may be split, one portion being sent to Texas or Oklahoma, and the other to Boston; or one portion may be stored under a hot iron roof and the other in a relatively cool warehouse. Under such circumstances, the goods stored in the cooler location remain in perfect condition long after the others have become springers. This is due solely to the acceleration of the higher temperature on the action of the fruit acids on the metal of the container.

In the inspection of cans with concave ends and apparently normal in every way, the analyst often desires to know whether they are likely to become springers in the near future. In such cases, before opening the can, its vacuum is determined by means of a suitably equipped gauge. The vacuum in the can has no significance in itself, but is often of value when considered in connection with other data.

Vent Holes.

The number of vent holes appearing in the can is a matter which has occasioned frequent error. No opinion can be formed of the character or history of canned foods by the number of vent holes in the can. The old process of canning many products, including canned beef and salmon, used two

vent holes. This was described by the writer as applied to canned beef in Bureau of Chemistry Bulletin No. 13, part 10, published in 1901. Although the practice is not as prevalent now as it was at that time, it is still found at many plants.

The procedure which gives two vent holes is this: The cans are sealed, tipped and given a kettle exhaust, that is, they are heated in the process kettle about half an hour and again vented to permit the escape of air. The new vent hole is then sealed and the cans are again placed in the process kettle and sterilized.

It sometimes happens that the closing of the second vent hole is prevented by a piece of solid material, such as meat, lying against it. When this occurs, a third vent hole is made in order to have an opening when the second one is closed. If anything lies against the can where the third vent hole is made, the can is vented in still another place and this is continued until a spot is found that is not in contact with the contents of the can.

Even when the method just described is not employed, two or more vent holes are occasionally found in hole and cap cans containing foods of all descriptions. This occurs when the can is not properly closed. At the end of every hole and cap line in the cannery, a man is stationed to inspect the cans as they pass and set out on a table those not properly sealed. Some packers carry the cans on a conveyor through a trough of hot water when he may detect "cap leaks" and "vent leaks" due to defective sealing by bubbles of air escaping from the top of the can. Whatever the method of sorting, there are often enough cans that are not properly sealed to keep a man with a hand-soldering iron busy patching them.

These cans can only be patched with an open vent hole to permit the escape of air while the hot steel is on the cap. This is generally accomplished by removing the solder from the old vent hole with a hot soldering iron. Frequently, however, a new vent hole is made. This second vent hole is in no respect a mark of inferiority. The cans are patched immediately and their sterilization is not delayed more than a few minutes. Usually it is not delayed at all.

Again, with sanitary cans, there are various reasons why a vent hole may be found. One incident came to the writer's attention a few weeks ago in which, by misunderstanding, the brine was omitted from several hundred cans of shrimp. The workmen understood that they were to be packed "dry." It was the intention of the superintendent to pack them with brine and he could not spare a process kettle long enough to give these cans the process necessary for dry shrimp. What he did was to make two vent holes in the cans, introduce hot brine and close the vent holes again. It was all done in a few minutes and the cans so treated were sterilized in the same process kettle as those that followed them through the sealing machine. The contents of these cans were identical with those of the cans filled and brined before closing.

Again, one crabmeat packer of the writer's acquaintance buys his sanitary cans with the tops already vented in order that he may continue his former practice of giving the cans a retort exhaust with open vent.

One not familiar with the industry might suspect reprocessing on seeing the cans described in these two illustrations. If he would investigate the matter further, however, he would find that reprocessing would cook the shrimp to pieces and would darken the crabmeat to such an extent that it would be unmerchantable. On the other hand, some foods can be sterilized a second time without materially changing their appearance.

Presence of vent holes is never proof of decomposition. The question of vent holes is merely one of the points that should be noted from the external inspection of the can and considered in connection with data obtained from the examination of the contents.

Odor, Flavor and Appearance.

On opening the can, the odor, flavor and appearance of the contents should be carefully observed. In this manner the analyst should be able to determine approximately the quality or commercial grade of the sample. He may thus judge whether the product complies with the grade for which it is sold, or with the representations on the label. The importance of establishing the true commercial grade is not always fully understood. It is not merely a commercial question. A fancy or first quality article, for instance, can only be prepared from a raw product grown under proper conditions, harvested at the best stage of maturity, and canned promptly. Moreover, in many varieties of foods, a fancy or first grade product can only be prepared by experienced and skilled men. If the raw material is not of suitable grade an experienced man will recognize that fact by the appearance or flavor of the finished product. If the raw material is not properly handled, if it is allowed to stand for even a fraction of the time that is customary with fresh vegetables in our city markets, that fact is often apparent in the canned food. It may be suitable for consumption and comply with the law if properly labeled and still not be of the highest commercial grade. For instance, if not handled promptly, peas lose in flavor and asparagus has a tendency to become tough and bitter. To retain a high quality, they must be canned as soon as possible after they are harvested.

A movement is under way to make the commercial grades more uniform and to have the products so labeled that these grades will be understood by the purchaser. As this movement progresses, the importance of holding the products true to label will increase. Even at the present time, this matter is very important and should be considered in the enforcement of food laws.

The importance of odor and taste in the inspection of canned foods can not be overestimated. If the odor and flavor of a sample be not entirely normal, the possibility of delay in manufacture and consequent bacterial change should be considered. In such a case, a microscopical examination is often of value.

Microscopical Examination.

This method is applied to the liquor if the product has a distinct liquor. If the sample be thick and pasty, enough water may be added to give it a suitable consistency. In either case, water should be added if necessary, to so thin

the sample that the number of microscopic particles will not be too great for their careful study, and this liquor or mixture should be allowed to stand in a beaker or cylinder for a moment until the heaviest particles settle. The proper technique must be worked out with each product. A mount should then be made and examined microscopically. If bacteria are recognized by size and shape, their presence may be confirmed by bacteriological stains. If either yeasts, or bacteria are found in considerable numbers, the analyst should endeavor to find the reason for their presence. Obviously this method is not applicable to products made by process of fermentation. Kraut, for instance, is prepared by such a process and contains a very large number of bacteria, but should contain few if any yeasts.

The presence of bacteria in considerable numbers is merely an indication of the beginning of bacterial change at some time in the history of the product. It may be due to allowing a few cans to stand too long (because of a breakdown in the machine) after filling and before sterilizing, or to storing the raw product for a number of hours in boxes or baskets as is done with fresh vegetables in our city markets. This method may help or mislead an analyst, according to his ability and experience. It can only be used intelligently in connection with the other methods described.

The method requires special aptitude, long training and unremitting care. There is no other analytical method applied to foods which is now used so badly and with so little aptitude or judgment as the method for determining the presence of bacteria with the microscope. Mention is made of the importance of special aptitude in judging the odor, taste and flavor of the food. It is necessary to no less extent in a microscopic examination. Both methods are largely subjective. Experience with samples of known character, both fresh and canned, is absolutely necessary. Without such experience, the analyst can only be sure of making serious mistakes.

It should be borne in mind that this is a microscopical and not a bacteriological method. It is used in determining the presence of dead micro-organisms. It is therefore widely different from the bacteriological method which follows:

Bacteriological Examination.

In the inspection of canned foods, a bacteriological examination is only of value when considered in connection with other methods of analysis. A food that has undergone bacteriological decomposition may be a sterile because of the inhibiting action of products of the life functions of the organisms causing the decomposition.

On the other hand, it is believed by some that canned foods may contain aerobic bacteria which cannot develop because of the absence of oxygen and which may therefore remain dormant for a considerable time. It is also believed by some that certain organisms may remain quiescent in some foods because the food does not provide a suitable medium for their growth. The truth of the last two ideas suggested has not been demonstrated and in fact it is well known that canned foods are almost universally sterile. At the same time, until questions of this nature are settled, bacteriological methods are of more value to research investigations relating to canned foods than in their inspection. In the case of goods very recently packed and to determine whether the process of the plant is sufficient, a bacteriological examination is of value when used in connection with the other methods described above. The results of a bacteriological examination of freshly packed goods can be confirmed by incubating cans for several days and noting the odor, flavor, and acidity of their contents.

Determination of Acidity.

This is a method with which relatively little has been done in the examination of canned foods. The laboratories that have used it have not tabulated their results and the data now existing from the titration of normal samples is therefore not available. It is desirable that authentic data of this nature be secured.

The separated liquor should be titrated when practicable. It need not be filtered unless it contain finely divided solids that may obscure the end point. In the absence of a distinct liquor, the sample should be finely comminuted and a weighed portion placed in a beaker with water. In either case an excess of standard acid should be added, the sample boiled, cooled in water to approximately room temperature and titrated back with standard alkali using phenol-phthalein as indicator.

An abnormally high acidity, or, under some circumstances, an abnormally low acidity, may be of much value when considered in connection with the results of the methods mentioned above.

Fill of the Can.

When the can is opened, the fill should be carefully noted. If the can be opened by cutting around the side, near the end, it is often convenient to pour the liquor through the opening thus made before turning back the top. It is important that in the examination of a single product a uniform method of separating the drained solids should be employed. If the food under examination consists of insoluble material, such as fruits or vegetables surrounded with water, syrup or brine, the amount of food present should be noted. It may be well to weigh the drained solids and liquor after separation with a suitable screen the size of whose mesh will depend on the product under examination. With some products, a one-quarter inch screen is appropriate. With others a smaller mesh is necessary.

It is often important for the analyst to consider the relation between the drained solids found in the can and the weight of food originally weighed into the can. For instance, with dry pack shrimp the "cut out" weight is less and with wet pack shrimp it is greater than the amount of shrimp originally weighed into the can.

In working with fruit packed in syrup, the specific gravity of the syrup may be determined. Then, taking into consideration the average sugar and water content of the fruit present and the proportion of that fruit in the contents of the can the analyst can calculate approximately the weight of the fruit and strength of syrup that was used originally. The influence of syrup of different strengths and weight of the drained contents has been worked out by Bitting for a wide range of fruits.

Whether the drained solids and liquor be weighed or not, a

record should be made of whether the solid portion of the contents appears to be present in the right amount. In this connection, care should be taken that the analyst be not deceived by the solids floating at the top of the liquor, thus giving the appearance of a good fill, even if the fill be slack. Here again the analyst is not competent to form an opinion unless he knows what is normal with that particular variety of food. Some foods may shrink in processing or become softened so that they settle down, leaving a can which is apparently slack filled although it may have been full at the beginning. Let us take canned shrimp as an illustration. Even if the can be packed so full of shrimp that it will mat together and be unattractive to the eye, the product will often soften on processing so that the fill will appear slack to one not familiar with the product.

The analyst must bear in mind that the examination of one or two cans will often lead to incorrect conclusions. No matter how careful a packer may be, it frequently happens that the amount of brine in the can is either too much or too little. In a well managed corn cannery, for instance, there is always one man whose duty it is to open cans at frequent intervals to determine whether the corn is of the right consistency. The character of the corn changes from hour to hour, requiring that the relative amount of corn and brine shall be changed from time to time to give the proper results in the finished product.

Examination of the Can.

Cans should be carefully examined to determine whether they are tight. This is more important in constructive work checking up the efficiency of a plant than in the enforcement of food laws. It is just as essential for the canner to know when his cans are defective as when they are not completely sterilized. In both cases he may expect spoilage.

An adequate description of the exact procedure to be followed in determining whether a lot of cans is tight is scarcely practicable within the scope of this paper. Some types of cans may be emptied through a small opening, thoroughly cleansed, again sealed up, air pumped into them under pressure and leaks detected by bubbles of air escaping when the can is held under water. The can, after emptying and cleaning thoroughly, may be sealed in a partial vacuum and the vacuum determined after the can has stood a number of days. The crimped edges of sanitary cans may be laid bare by filling and examined with a lens. Soldered seams may be "stripped" (pulled apart) and carefully inspected for possible imperfections of workmanship. If a large percentage of the cans of a given lot of food is found to leak because of a common fault in their construction, the entire lot of food may have spoiled. Such cases are usually discovered at the plant and therefore come within the experience of the packer's chemists rather than that of an official enforcing a food law. If they should come to the attention of a food inspection official, the examination of the can is important in that it gives fuller information regarding the nature of the product, and may confirm other data.

Cans containing foods likely to produce pin-holes should be gone over in great detail with a needle. If the analyst has not exceptionally good eyes, a simple lens or reading glass is sometimes useful. The application of the same method of examination to the inside of the can will disclose whether the can is pitting and thus likely to form pin-holes. For this both ends of the can must be cut off and the body opened by cutting down the side.

In the examination of the can, as in the examination of the contents, it is obvious that the results obtained from a single can may be misleading. There are many reasons for this. For instance, small leaks, after admitting contaminated air, or contaminated water from the cooling tank, may be closed by particles of food, or, as in the case of water pipes, by rusting. If we find leaks in something like half the cans from a lot of swells, we assume that they probably all leaked at the beginning. This explains the fact which so many find it difficult to understand—that a swell may be and frequently is due to a leak in the can.

In such a case, a sample consisting of a single can or a small number of cans is frequently not representative of the lot of goods from which it is taken. After examining a half dozen cans, the writer frequently sends for a case and sometimes several cases. Even then an inspection of the entire lot in the storeroom will often throw additional light on the cause of the difficulty.

Subsequent Examination.

The nature of any further examination must depend on the particular variety of food and, to some extent, on the character of the sample and the reason for the examination.

A chemical examination may be made to determine whether certain standards are complied with, as the determination of fat and solids in evaporated or condensed milk.

The causes should be understood of various discolorations that are sometimes found on the inside of the can and on the surface of the food. For instance, with some products like kidney beans and, to a certain extent, with peas, the entire inner surface of the can which comes in contact with the food is more or less dark in color owing to a slight film of insoluble tin sulphide. With peas, the portion of the can which stands uppermost for a few hours immediately after processing and cooling has a number of spots consisting apparently of iron oxide. These spots gradually become dark until they are quite black, probably owing to the conversion of a portion of the oxide to sulphide. As just stated, these spots on the inside of cans are universally present. Apparently they cannot be avoided and they are not in any way objectionable. They sometimes startle a canner who sees them for the first time and the chemist inspecting his product should be able to explain them.

With some products, patches of iron sulphide, apparently in colloidal form and sometimes mixed with particles of food, adhere to the sides of the can.

These patches of iron sulphide are not frequent on the whole, but have been found in considerable numbers. They vary in size and sometimes their thickness is so great that they become mixed with the food in their immediate vicinity and are objected to by buyers who do not understand their nature. When large and especially when they become mixed with the food

these patches are unsightly, but the amount of iron present is really exceedingly small. The cause of these patches is only partially understood. They always form like the spots just referred to on pea cans on the portion of the can that is uppermost after processing and cooling, which therefore does not come in contact with the food. On storage, the spots gradually become less conspicuous. The conditions leading to their formation are not entirely understood, but it has been determined that they are less numerous and smaller as the can is fuller and freer from oxygen.

The amount of tin and iron in acid fruits may be significant when considered in connection with other data. On the other hand, with vegetables, such as asparagus, string beans and pumpkins, whose action on the tin is believed to be due to amino bodies, there is no relation between the amount of hydrogen in the gas content of the can.

We are just beginning to understand this subject and all data bearing on it is of value.

It may sometimes be of interest to determine the composition of the gas in a can with bulged ends. When the can is sealed the air is not entirely removed. Some carbon dioxide is formed in processing and some may be present in the food before processing, especially if it is not sterilized very promptly. Hydrogen is formed by the action of fruit acids on the metal of the container.

It has been pointed out by Baker that hydrogen is not found in the gases of the can until oxygen has disappeared. The composition of the gas present, therefore, may sometimes serve to confirm data obtained by other methods of examination.

President Barnard: We are fortunate in having with us the president of the National Canners' Association, Mr. Dickinson. Won't you show your face so those food chemists of the country may see you?

REMARKS OF MR. DICKINSON.

Mr. President, I hesitate to speak here because I am not a chemist. My knowledge of chemistry is only so elementary as the average man gets in a college education, and that was quite a while ago.

I have been quite interested in the questions asked about the tipping and the extra dots of solder indicating an opening in the cans and I fully agree with Dr. Bigelow that any man who wanted to cover this up could do so easily by using the same hole again, but I would consider that the extra dots of solder were pretty good evidence that there was nothing to cover up there.

There was one point that Dr. Bigelow mentioned that I thought possibly was not generally understood.

It is customary in all factories using cap hole cans to handle the filled can on a conveyor to the machine which solders the circle around the outside of the cap, the vent hole being left open to let the steam out. Then, sometimes by machine and sometimes by hand, these vent holes are soldered.

If after that is done the inspector notices any imperfection in the sealing of the cap, it is necessary to open that vent hole, in order to let the steam out, while you are resoldering the circle around the cap, and for that purpose some canners just make another vent hole alongside the other, by sticking an awl through it, but in our factory we never use the awl, because it is quicker and easier to just take the hot soldering iron and set it on the tip and at the same moment give it a little twist and it takes the solder out to one side and opens the hole.

It is done quicker and easier than they can do it by an awl, so if a man wanted to cover up he would do it that way rather than opening it up with an awl.

President Barnard: If you think this subject has been covered we will pass on, with your permission, to another paper which Dr. Bigelow has prepared along the same line, and which I am going to ask him to read at the present time, on the vitally important subject of "Tin in Canned Foods." Dr. Bigelow, we will be glad to hear from you.

TIN IN CANNED FOODS.

BY W. D. BIGELOW.

Mr. Chairman, Ladies and Gentlemen: It has long been known that the acids of canned fruits dissolve more or less tin from the container, the amount depending partly on the age of the product and the temperature of storage. It is also well known that some foods having but a slightly acid reaction, such as pumpkin, string beans, and shrimps, attack tin to a considerable extent. This has been shown¹ to be due in some cases at least to the presence of amino bodies in the food. The tin in canned foods has usually been assumed to be in solution. Articles on this subject and reports of analytical work frequently refer to the tin contained in the food as "soluble tin salts." It was pointed out by the writer² some time ago that the tin in canned food was largely, some times chiefly, in an insoluble form.

It is a common experience in the laboratory that compounds of tin separate out from reagent solutions of tin chloride. This is ordinarily prevented by the use of strong hydrochloric acid. The same separation occurs with solutions of compounds of tin with organic acids. It appears therefore that the acid acts as a carrier dissolving the tin from the coating of the container and carrying it into the food where the tin separates in an insoluble form, leaving the acid free.

With non-acid or slightly acid foods of the types mentioned above, this deposition of tin in insoluble form probably occurs to a greater extent than with the acid fruits. In both cases it appears that a considerable proportion of the soluble tin salts are carried within the solid particles of food before they are hydrolyzed.

It is conceivable that the higher tin content of the drained solids than of the liquor might be due to metathesis, the tin replacing calcium or magnesium, for instance, in its insoluble compounds within the solid particles of food. The property of solutions of tin salts, however, to deposit insoluble tin compound insoluble basic stannic compound, appears to afford a more probable explanation of the presence of insoluble in place

of soluble tin compounds in canned foods. In either case the drained solids of canned foods contain a materially higher amount of tin than the liquor, and this difference increases with the age of the sample. Thus the high tin content of old canned foods is largely due to insoluble compounds of tin which are presumably less likely than soluble compounds to be absorbed from the intestinal tract.

The figures given below were obtained by determining the amount of tin in drained solids and liquor, respectively, and calculating the amount of tin in the original sample from the figures thus obtained and from the weight of drained solids and liquor, respectively.

TABLE I.

	--Milligrams per kilogram--		
	In total sample.	In drained solids.	In liquor.
Cranberries	170	254	33
Raspberries	194	294	39
Cherries	107	163	52
Peaches	193	251	86
Pears	130	151	99
Plums	125	180	43
Shrimps	224	381	67
Spinach	86	131	35

The relation of the tin content of the drained solids to that of the liquor of certain canned foods is brought out more definitely in Table 2. The samples shown in this table were taken from an experimental pack in which the various cans were as uniform as they could be made. At intervals after the food was packed sample cans were examined to determine the tin content of the food. At least two cans were taken for each sample. The drained solids and liquor were separately weighed, the tin determined in each and expressed in terms of milligrams per kilogram of drained solids and liquor respectively. From these figures, the tin content of the original sample was calculated.

By a study of this data we are able to form a rough approximation of the amount of tin which is in soluble form. For this purpose it is necessary to assume that the tin of the liquor is all soluble. This is probably not the case. It is extremely unlikely that the soluble tin compounds all find their way into the solid particles of the food before the separation of the tin in insoluble form. It is much more likely that a considerable portion of the tin in the liquor is a finely divided insoluble oxide, hydrated oxide, or basic salt of tin. It is altogether probable that the amount of soluble tin in these samples did not increase after the first analyses were made, and that the subsequent increase of tin in the liquor was due to the separation of finely divided insoluble compounds of tin. The thought also suggests itself that a considerable portion of the tin that appears to be in solution is probably in colloidal form. If we assume all the tin of the liquor to be soluble, therefore, the amount of tin calculated as insoluble will be less than the amount actually present in that form and the results will at least be conservative.

The figures given in Table 2 in the column headed "Insoluble tin in drained solids," were obtained in the following manner, taking, as an example, the sample of asparagus which was examined two years, seven months after packing. The liquor in this sample contained 5.2 per cent of solids or 94.8 per cent of water. One kilogram of the liquor, therefore, contained 948 grams of water. Since a kilogram of liquor contained 238 milligrams of tin and 948 grams of water, there was in the liquor $238 \div 948 = 0.25$ milligrams of tin for each gram of water. The drained solids were found to contain 8.3 per cent of solid matter or 91.7 per cent of water. One kilogram of the drained solids, therefore, contained 917 grams of water.

Now it is fair to assume that the relative amount of water and dissolved tin in the drained solids is substantially the same as in the liquor. Figuring on that basis, the amount of soluble tin in the drained solids is $914 \times .25 = 229$ milligrams per kilogram. Since the total tin content of the drained solids was found to be 554 milligrams per kilogram, it follows that $554 - 229 = 325$ milligrams per kilogram must be in an insoluble form.

As stated above, this amount must be well within the truth. If any considerable amount of the tin of the liquor is insoluble, the insoluble tin of the drained solids must be considerably more than 325 milligrams per kilogram. The remaining figures in the column marked "Insoluble tin in drained solids" were all calculated in the same manner using average figures for the weight and water content of drained solids and liquor as the individual determinations were not made.

The column headed "Insoluble tin in drained solids" is of particular interest although, as stated above, it is believed that the figures in this column are something less than the truth, the relative amount reported as insoluble tin in samples of different ages shows that the process of hydrolyzation is a continuous one.

The figures given in the last column headed "Soluble tin in total sample" were obtained by adding together the figures in the column headed "Milligrams tin per kilogram liquor" and "Soluble tin in drained solids," after calculating these respective figures to milligrams of tin per kilogram of tin of original sample. It is interesting to note that the figures in this column are almost identical with the figures in the column headed "Milligrams tin per kilogram liquor." It is probable, therefore, that an approximate idea of the amount of soluble tin in a sample of canned food can be obtained by determining the amount of tin in the liquor of the food, although the figure so obtained will obviously include any soluble tin which may be present in the liquor in a finely divided state, and also any tin that may be present in colloidal form.

Recent workers agree that the ideas of the earlier writers on the toxicity of tin were erroneous. It is now known that the toxicity of soluble tin compounds is at least very much less than it was formerly supposed to be. It is evident, however, that the results obtained in the study of soluble tin salts can-

¹Bigelow and Bacon. Circular 79, Bureau of Chemistry, U. S. Department of Agriculture.

²Bulletin No. 2, Research Laboratories, National Canners' Association, August, 1914.

not be used as a criterion on which to judge the toxicity of tin in canned foods. Whatever the insoluble combination in which tin occurs in canned foods, it is in all probability less likely to be absorbed from the intestinal tract than soluble tin compounds. The same is true, perhaps to a less extent, of tin in colloidal form. At any rate, the need of experimental work on the toxicity of tin as it occurs in canned foods is obvious.

TABLE NO 2.—SOLUBLE AND INSOLUBLE TIN IN CANNED FOODS OF VARIOUS AGES. RESULTS EXPRESSED IN MILLIGRAMS PER KILOGRAM.

Variety of food.	Age of Sample.	Tin in total sample.	Tin in drained solids.	Tin in liquor.	Soluble tin in drained solids. ¹	Insoluble tin in drained solids. ¹	Soluble tin in total sample. ¹
Asparagus	8 mo.	280	322	200	193	129	196
Asparagus 1 yr.	5 mo.	433	489	252	248	241	249
Asparagus 2 yr.	7 mo.	470	554	238	229	325	233
Lima Beans	9 mo.	80	99	46	38	61	41
Lima Beans 2 yr.	9 mo.	173	254	40	33	221	35
String Beans	2 mo.	124	169	63	60	109	62
String Beans	7 mo.	130	174	64	61	113	63
String Beans 1 yr.	3 mo.	299	442	97	93	349	95
String Beans 1 yr.	8 mo.	250	382	102	98	284	100
String Beans 2 yr.	6 mo.	434	658	132	127	531	130
Wax Beans	3 mo.	93	143	39	38	105	39
Wax Beans	7 mo.	116	176	52	50	126	51
Wax Beans	10 mo.	139	251	55	53	198	54
Wax Beans 1 yr.	3 mo.	230	391	72	69	322	71
Wax Beans 1 yr.	8 mo.	217	359	87	84	275	86
Wax Beans 2 yr.	4 mo.	347	616	88	85	531	86

¹The figures in these columns are based on the assumption that the tin in the unfiltered liquor is all in solution, whereas some of it can be removed by filtration and a portion of it is probably in colloidal form. The figures for soluble tin in these columns are therefore too high and those for insoluble tin must be too low. These figures are offered as a conservative statement that is well within the truth.

President Barnard: The next paper is "State Milk Surveys as a Means of Improving Municipal Supplies," and I take great pleasure in introducing Dr. Klein, State Analyst of Illinois.

STATE SURVEYS AS MEANS OF IMPROVING MUNICIPAL MILK SUPPLIES.*

BY DAVID KLEIN.

Mr. President and Gentlemen of the Convention: Of all food control problems, none has received greater attention than the milk supply. That milk may be the means of transmitting certain diseases is so well established and the literature on the subject is so accessible that reference to it here would be superfluous. The larger cities, realizing the problem, are attempting to solve it in various ways. It would seem that the widespread agitation for clean, wholesome milk would have impressed upon the smaller communities the need of adequate supervision of the milk supply. However, in Illinois at least, the smaller cities have made little effort to control the sale of milk and other food products. This is quite in keeping with the inadequate measures to provide for efficient health departments. Lack of funds, indifferent public opinion, and local politics are the main causes for failure of municipal supervision of the milk supply.

Supervision by state officials of all milk sold in the state may be the ideal method of control; but until such time as the state inspection force is large enough to exercise continuous supervision, the task of controlling the local milk supply devolves upon the several municipalities. In the hope that the public interest could be aroused and that efficient control would be instituted, the Illinois Food Department conducted the municipal milk surveys that are the subject of this paper. Without going into details, at this point, of the value of these surveys, it can be said that the results were gratifying and justified the labor and money expended upon them.

The plan of work was as follows: A temporary laboratory equipped to carry on chemical and bacteriological examination was established in the town to be surveyed. For the Bloomington-Normal survey use was made of laboratory facilities at the Illinois State Normal University. The work at Joliet was performed in the Township High School. At Quincy and Elgin, the laboratory was set up in an office rented for the purpose.

At first thought one might suppose that a laboratory fitted up under the latter conditions would be unsatisfactory. However, it has been our experience that very acceptable working quarters can be arranged in an office.

The matter of doing all the analytical work in the Chicago laboratory of the department was considered at great length. The advantages of a field laboratory outweighed any considerations of inconvenience attached to such a project. Experience has confirmed the preference for this plan.

After the laboratory was established, enough inspectors were assigned to the work so that samples of milk as sold by all dealers could be obtained the same day. Wherever possible, original bottles were taken as official samples; in the case of bulk milk, precautions were exercised in obtaining fair and trustworthy samples both for chemical and bacteriological analysis. Whenever the milk was suspicious or unsatisfactory, further samples were taken.

In a similar manner, data were collected on the milk as sold by restaurants, hotels, cafeterias and groceries, and received by

the city bottling plants. There were also investigated in detail, several pasteurizing plants whose product was decidedly unsatisfactory. Lastly, herd tests were made, both chemical and bacteriological. Thus there was secured a more or less complete picture of the character of the milk supplied to the various cities.

Deficiency in solids not fat was mainly due to watering by the producer. It is interesting to note that the watering was rarely carried to such an extent that the fat was less than 3 per cent. This is in all probability due to the universal knowledge that milk must have a legal minimum of fat. The solids not fat item is not at all understood. The watering of a high fat milk could be carried to 20 or 25 per cent without lowering the fat below 3 per cent; of course, the solids not fat were reduced excessively. When watering was suspected, the laboratory results were confirmed by herd tests. In every case but one, composite samples from the herd showed solids not fat well above the legal limit. Moreover, in a large number of cases, not a single cow in the herd furnished milk of as poor quality as that offered for sale.

This brings up the question of the reasonableness of fat and solids not fat standards for milk. Authentic samples taken from individual cows and composites from whole herds or portions of the same gave results that would warrant the conclusion that although certain cows do produce milk below standard, the milk from herds in all cases examined but one was well above the minimum standard.

As a general conclusion concerning the chemical quality of the milk, it may be said that it is no hardship for all producers to put out legal milk. Furthermore, in certain of the cities, extensive watering was practiced.

Turning to the quality of milk as reflected in the bacteriological findings, we are at once confronted with the lack of a standard. This is not the place to discuss the feasibility or advisability of a uniform state standard. However, in order to pass upon the milk there must be some standard if nothing more than a metal one. It is well recognized that total counts are capable of many interpretations; without the history of the milk erroneous conclusions may be drawn. In many large cities, a total count of 250,000 per c.c. has been adopted as the standard. This includes the complicating factor of transportation and time. In the cities surveyed, most of the milk was produced locally and delivered in not longer than eighteen hours from the time of night's milking. So it seemed reasonable, as a first approximation, to evaluate all milk on the basis of 250,000 per c.c.

The number of samples examined exceeds the number of dealers, because second and often more samples were taken of the milk that seemed unsatisfactory. When the first sample was satisfactory no further samples were taken. For this reason, no inference can be drawn from the table of the amount of milk having counts as indicated above, that was sold in the various cities. Restaurants and hotel milk is also included in the table. This milk gave much higher counts than the average milk sold to the housewife. Comparison between the quality of the various cities cannot be made owing to the great difference in temperature prevailing at the time of survey. Thus the Quincy survey was carried on in hot weather, whereas the weather was unusually cold during the Elgin survey. This was reflected in both directions in the matter of total bacteria present; yet dairy inspections indicated no such marked difference in milking methods.

It may be of interest to note that the minimum count was not that of pasteurized nor certified milk. None of the latter was produced, although as far as counts were concerned, some of the milk would have passed the grade.

Of the milk sold in four cities, the greater quantity is unpasteurized. Where claims were made that the milk was pasteurized, particular attention was paid to it. In a few cases, the pasteurization process was carefully supervised and controlled, yielding a satisfactory product. On the other hand, several dairies were putting out pasteurized milk that indicated improper control of the process. These cases were investigated in detail.

During a study of the causes of certain unsatisfactory milks, some interesting data were collected on the contamination of the milk after milking. Unclean utensils, bottles and cans were greater factors in the introduction of bacteria than were unsanitary conditions of the physical environment during the milking. As will be shown subsequently, the number of organism that entered the milk during the milking process is not large. If any of the surveyed cities should have enacted a standard of 100,000 organism per c.c. or even lower, most of the producers could have met the standard at the time of milking. Failure to keep the milk cold and the use of unclean bottles or cans are the causes for high counts.

As important as the cleanliness of utensils is the matter of temperature. Great efforts were made to impress upon the producers and dealers the necessity of low temperature. To bring home the point more forcibly, samples were taken of both night's and morning's milk as delivered to the receiving stations.

To arouse public interest, the result of the survey was made the basis of lectures before the Women's Club, Civic Improvement Leagues and other public spirited organizations. Articles were prepared for the newspapers. Copies of the report were sent to the health officers.

What was accomplished? In a broad way, this much has resulted:

1. One city has established its own chemical and bacteriological laboratory.
2. Another city is conducting its own survey this summer.
3. A third city is considering the adoption of a milk ordinance.
4. The milk supplies have been improved, according to the health officers of two cities.
5. Three cities not surveyed have unsolicited requested that surveys be made.

These results are sufficiently encouraging to convince the writer that surveys such as form the subject of this paper should occupy a prominent place in the program of state food officials.

President Barnard: The next paper follows so closely that of Dr. Klein's that I am going to call for it and then we will have the discussion of both papers.

*The numerous tables of data of the original paper are omitted from this report.

The last address of the evening is, "The Milk Problem of the Village and Small City," by Dr. Whitney, State Chemist of Vermont.

MILK PROBLEM IN TOWN AND SMALL CITY.

BY C. F. WHITNEY, VERMONT.

Mr. Chairman and Ladies and Gentlemen: The milk problem is so complex in its various stages and seemingly must always continue so to be, on account of its source and manner of consumption, that it must necessarily be studied apart from any other food question. Moreover milk furnishes us one of the most, if not the most important food problem, as the pre-eminence given it in food discussions amply attests. As stated the problem is in a field by itself, for no other food consumed largely in the raw state has its source where contamination by dirt is so apt to take place, and none offers such ideal opportunity for the growth of bacteria.

Water supplies in cities are now almost invariably safe and in many states the small supplies are closely watched and frequently tested at the state laboratories. Moreover water supplies unlike milk have generally quite satisfactory sanitary sources and are not a good culture medium for pathogenic organisms. Meat at the present time has federal inspection very largely and is not eaten in the raw state. Canned goods and confectionery quite generally conform to modern sanitary requirements in their manufacture. Bakeries are in many states inspected and properly regulated. Fruits that are not protected by an outer inedible covering can be easily cleansed of adhering dust and bacteria. Vegetables are readily washed and are generally cooked before being consumed. In thus looking over the whole field of foods, we find none which from a sanitary and health standpoint offers a more important, complex and difficult problem than does that of milk.

Many if not most phases of the milk question apply equally in all sections. Every locality wants pure, clean and safe milk, but the means for obtaining it vary somewhat, depending on the size of the city and the proximity of its source. It can be readily seen that large cities, especially coast cities like New York and Boston, which obtain their supply from distances up to several hundred miles and from thousands of dairies, cannot possibly without prohibitive expense adequately inspect the source of its supply so that a clean product can be assured. Much no doubt can be and is being done along this line, but the close supervision which could be done in a small local section on the outskirts of a small city is impossible.

The encouragement offered by contractors in paying a higher price for milk that conforms to certain chemical and bacteriological standards would seem to be the most effective in persuading dairymen supplying large cities to give a clean product and this must be coupled with pasteurization at central stations.

By adequate inspection is not meant police inspection, but one that would be considered educational and encouraging, and this would seem to be obtainable in the cases of dairies supplying all towns and small cities. The various aids in making milk acceptable are too well known to need repeating, but a few of the principal ones will be mentioned. Most important of all is to use only healthy dairy animals, especially free from tuberculosis. The animals should not be allowed to wade through filth in the yard; floors should be tight, and litter removed twice a day in carriers which convey it several feet from the stable; bedding and length of floor should be such as to keep animals clean; animals should not be fed just prior to milking; they should be brushed every day or two, and udders clipped of long hair as required and wiped with a clean, damp cloth before each milking; hands of the milker should be washed clean and one of the most important things in the equipment is a pail with small opening; any milk which is bloody, stringy, or unnatural in appearance should be rejected.

If these simple and comparatively inexpensive improvements are made, little dirt need enter the milk. All these things add somewhat to the cost of production, but not necessarily a great deal. If a score card is used, 80 per cent or more should be given to methods, and not over 20 per cent to equipment. It is being realized more and more that clean milk can be produced without expensive new stables, cement floors, etc.

There must be some incentive for the producer to give clean product and the best inducement is an increased income by so doing. Small dairymen are not generally good business managers. Their training is not such as to enable or inspire them to study the leaks and correct the wastes. They do not see them and many go on blindly breeding from poor milkers, using unbalanced rations, and continuing in the old unscientific hit or miss way of their fathers, instead of using the methods taught, or that should be taught, them by the various extension services of the state agricultural colleges and experiment stations.

Right here is where one efficient, patient, adaptable milk inspector can help, who has the confidence of the dairymen and who means to them an adviser and instructor. It is true that men of this type are not always obtainable for the small salaries paid inspectors, but if it is realized that no one factor can more certainly secure for the town or small city clean, safe milk than a good inspector, and his duties may be coupled with other work, if time allows, it would seem foolish not to make the effort to find the proper man.

Having successfully stamped out diseased cows from the supply and secured clean milk, we still have the danger of infection by pathogenic bacteria from the handlers to deal with. A few rules properly enforced will help in this direction. Such would be the preventing of any one handling the product who is associated with one sick with an infectious disease, or who has been ill himself and not so fully recovered as to no longer be discharging harmful organisms. Such a one should at once be removed from access to the milk until fit to resume his duties. This would secure much safer milk but will not safeguard us from that very difficult because unrecognized factor, the innocent carrier. It would seem that absolute safety from this source of infection can be secured only by pasteurization. Whether or not this danger is so common and imminent as to require pasteurization for towns and small cities, thus

closely inspected and in other ways made unobjectionable, is hard to decide.

The economic aspect of the milk problem is as closely associated with the sanitary, because nothing will so contribute to clean milk as to put it on a paying basis, that this phase should be studied with the hope of lessening waste and if possible educating the public to realize that clean milk is worth paying a proper price for.

Quite apart from the dairyman studying his own individual economic problem, is the effective co-operation of all dairies supplying a certain town with the hope of lessening the work and time now consumed in delivery. When we see the rapid growth of late of co-operative and chain stores that operate on a cash non-delivery basis, and thereby can prosper and at the same time save the customer considerable, we wonder that some such co-operative system by the deliverymen could not work out in the case of milk.

The cash basis without loss of bottles could be secured by leaving only such full bottles as are represented by empties containing tickets that have already been paid for. If only one grade is required, and it would seem that this was enough in small communities where there are few very poor or rich and where proper inspection assures clean milk from all dairies supplying the town, and if the milk can all be brought to some central point or points to be afterwards distributed through co-operative methods by means that are for that purpose only, and that divide up the sections of the town so that only one travels over the same ground, then the great amount of time and labor consumed from the time the product leaves the farm till the return of the delivery team would be much lessened and the cost proportionately reduced.

The writer in conclusion would emphasize two points, viz: adequate, effective inspection and co-operation. The first to produce a safe, clean product; the second to deliver it so as to assure to the producers a good, satisfactory business rather than an up-hill, discouraging one.

Meeting adjourned.

SECTION B—THIRD SESSION, THURSDAY AFTERNOON, AUGUST 10, 1916.

Chairman Doolittle: There are two papers we passed expecting they would be on hand for this meeting. The first one is "Glue and Gelatin," by Carlton Bates. I wonder if there is anyone here who knows anything about that paper? The other is "Some Inexpensive Laboratory Apparatus," by Louis Jackson. Does any one know anything about that paper? (No response.) Well, if neither of those papers are present, I will ask Dr. Phelps to read his paper on "The Identification and Estimation of Lactic Acids in Biological Products."

[Note—A notation appears on Mr. Phelps' paper not to copy it into the proceedings.]

Chairman Doolittle: That concludes everything with the exception of the election of officers. What is your pleasure in connection with the election of officers?

There is, however, one matter that I think I ought to call to the attention of the members again, and that was the reference made in Mr. Barnard's address as to the advisability of discontinuing this Section and having only one general program. I would like to know what is the opinion of the members.

Mr. F. L. Shannon: Mr. Chairman, I of course am no longer a member of this official body. However, I still continue to take a great deal of interest in it. It has been suggested by some of the members that Section A should be abolished, too. While sitting here that came into my mind and the remark that Dr. Barnard made in regard to abolishing this Section, would it not be a good plan to continue this Section—Section A, I understand, will be continued—to continue this Section at least another year and request the President of the General Association to appoint a committee at which the chemists and commissioners would have a representation to discuss the advisability of discontinuing both of those sections. Then that committee could report next year, and then if it is so decided it can be discontinued. It is just a suggestion, if the chemists present do not want to vote to discontinue this Section.

Dr. Tolman: I think the question as to whether or not this Section should be discontinued can hardly be decided this year. I think the suggestion that Mr. Shannon made is the proper thing to do, because it may be possible that we may want to save this Section and we may want to direct its work a little more along the lines of activity that it was originally intended to be. We had some definite idea as to what kind of problems you were to discuss at these meetings. The program this year does not have enough of those ideas of the round table and general discussion, of taking up of problems, of work that is of general interest and which are more or less plans of work on things of that kind which we as men interested in the enforcement of the laws have to meet. Not so much purely chemical questions as the general plan of work and I make a motion that we recommend that the General Association appoint a committee to consist of three members, of which this Section shall be represented, to discuss the advisability of continuing this Section, with the plans of work stated, and make a report at the next annual convention, and then we will take up the question of future activity.

Dr. David Klein: I second the motion.

Chairman Doolittle: You have heard the motion. Is there anything to be said?

Mr. W. W. Randall: I do not know whether it is pertinent to the motion, but it goes without saying that there are constantly questions coming before experts in food and drug matters which are purely chemical, just as there are certain questions which are purely administrative. The administrative questions the chemists have little or no part in. The administrative officers have little or no direct interest in the technical chemical questions involved in the laboratory. It seems to me therefore that there is reason for meetings in which the purely

technical side of our respective lines of work shall have a chance of discussion and consideration. I would heartily endorse the motion that has been made so that the matter may be discussed in a thorough-going fashion.

Chairman Doolittle: This is a matter which I have talked over with several chemists and have talked about considerably. Personally, I believe that it would be inadvisable to attempt at this time to take any action that would discontinue the Section. I do think it advisable, however, to take some formal action whereby the feelings and wishes of all our members of the Association could be consulted and report at the next meeting or some future date, so we could decide what is best to do.

There seems to be some difference of opinion at the present time. If there is nothing more to be said, all in favor of the motion will manifest it by saying "aye"; contrary, "no." It is carried.

We will now proceed to the election of officers.

Mr. F. L. Shannon: The usual mode of electing officers in this Section has been to merely place in nomination some of the members of the Section for those offices and vote on them.

Chairman: I think we ought to make the nominations in as short a time as possible.

Mr. F. L. Shannon: It will be a very short procedure, and with your permission I would like to place in nomination for: President—L. M. Tolman, Chicago.

Vice President—W. W. Randall, Maryland.

Secretary—Dr. David Klein of Chicago.

(Nominations seconded.)

Chairman Doolittle: Are there any other nominations?

Mr. C. Clay: I move the nominations be closed and the election be declared unanimous.

Chairman Doolittle: Gentlemen, you have heard the motion.

Mr. W. W. Randall: I think there is just one comment that would naturally occur to one and that is this: Last year and this year, I am speaking now for myself, Mr. Caspara, the food and drug commissioner of Maryland was unable to attend these meetings. It was to that extent fortunate for me that he was unable to come, and he asked me to come as his substitute or his representative. It seems to be highly desirable that the officers of this Section should be men who can be counted upon to be present at any future meeting. I cannot most certainly make any promises for the future for myself, as probably Dr. Caspari will himself be in attendance at the next meeting and the chances are that I shall not be here. I make this statement in all fairness.

Mr. F. L. Shannon: That is a contingency which exists in every case.

Chairman Doolittle: Are there any further remarks? If not, all in favor of the motion will signify by saying "aye," opposed, "no." It is carried and the secretary will cast the ballot for Mr. Tolman, Mr. Randall and Mr. Klein.

(The Secretary stated that he had cast the ballot of the association for the gentlemen named, and they were declared duly elected.)

Chairman Doolittle: Is there anything further to come before the meeting of this Section?

Mr. Tolman: I move we adjourn until 8 o'clock. Motion seconded and carried. (Meeting adjourned.)

THE CONVENTION REGISTER.

Following is a complete list of those in attendance at the convention:

Delegates.

J. M. Moore, Food and Drug Clerk, Montgomery, Ala.
Dr. C. W. Garrison, State Health Officer, Dept. of Agr., Little Rock, Ark.
John Phillips Street, Chemist, Conn. Exp. Sta., Drawer No. 1, New Haven, Conn.
Frank H. Stadtmueller, Dairy and Food Commissioner, Elmwood, Conn.
R. E. Rose, State Chemist, Dept. of Agr., Tallahassee, Fla.
H. E. Barnard, Dairy, Food and Drug Commissioner, Indianapolis, Ind.
Alfred W. Bruner, Indiana State Food and Drug Inspector, State Board of Health, Indianapolis, Ind.
C. L. Hutchins, State Food and Drug Inspector, State Board of Health, Marion, Ind.
Frank W. Tucker, State Food and Drug Inspector, State Board of Health, Noblesville, Ind.
Richard White, Food and Drug Inspector, State Board of Health, Aurora, Ind.
B. W. Cohen, Food and Drug Inspector, State Board of Health, Indianapolis, Ind.
W. S. Matthews, State Dairy and Food Commissioner, Carbondale, Ill.
David Klein, State Analyst, Illinois Food Commissioner, 1637 Manhattan Bldg., Chicago, Ill.
John B. Newman, Asst. Food and Drug Commissioner, 1627 Manhattan Bldg., Chicago, Ill.
W. B. Barney, Dairy and Food Commissioner, Iowa, Des Moines, Iowa.
S. J. Crumbine, Sec. State Board of Health, Topeka, Kan.
L. E. Sayre, Dean of the School of Pharmacy of the Univ. of Kansas and Director of Drug Analytical Lab., 1323 Iowa St., Lawrence, Kan.
J. O. Labache, Acting Head of Kentucky Food and Drug

Control, Kentucky Agricultural Experiment Sta., Lexington, Ky.
Cassius L. Clay, State Analyst, Louisiana State Board of Health, New Orleans, La.
A. M. G. Soule, Chief of Bureau of Inspection, Dept. of Agriculture, Augusta, Me.
Howard S. Williams, Deputy State Food Commissioner, Mississippi Agricultural Dept., Jackson, Miss.
W. F. Hand, State Chemist, Agricultural College, Miss.
John J. Farrell, Dairy and Food Commissioner, Minnesota, St. Paul.
John McCabe, Asst. Dairy and Food Commissioner, Minneapolis, Minn.
Julius Hortvet, Chief Chemist, State Dairy and Food Dept., St. Paul, Minn.
W. W. Randall, Asst. Chemist, State Dept. of Health of Maryland, 16 W. Saratoga St., Baltimore, Md.
C. H. Chilson, Chief Milk Inspector, Board of Health, Detroit, Mich.
R. E. Woodruff, Inspector, Dairy and Food Dept., Howell, Mich.
M. A. Jones, Drug Inspector, Michigan Dairy and Food Dept., Ypsilanti, Mich.
John T. Rowe, Inspector, Dairy and Food Dept., Laurium, Mich.
James W. Helme, Dairy and Food Commissioner, State Dept., Adrian, Mich.
A. B. Todd, State Analyst, Mich. Dairy and Food Dept., Lansing, Mich.
Eugene P. Berry, Attorney, Mich. Dairy and Food Dept., 1309 23d St., Detroit, Mich.
Floyd W. Robinson, Chemist, Detroit Testing Lab., 56 Rosedale Court, Detroit, Mich.
H. D. Wendt, in charge of Dairy Div., Dairy and Food Dept., 1426 E. Michigan Ave., Lansing, Mich.
Burr B. Lincoln, Deputy Dairy and Food Commissioner of Michigan, Lansing, Mich.
Wm. C. Geagley, Chemist, Michigan Dairy and Food Dept., Walnut St., Lansing, Mich.
Waldo L. Scovill, Asst. Chemist, Michigan Dairy and Food Dept., Lansing, Mich.
W. M. Cobleigh, Chemist, State Board of Health, Bozeman, Mont.
F. H. Fricke, Food and Drug Commissioner of Missouri, 3218 Hebert St., St. Louis, Mo.
H. E. Wiedemann, State Chemist of Missouri, Food and Drug Dept. of St. Louis, Mo.
S. C. Dinsmore, Commissioner, State Experimental Sta., Reno, Nev.
E. F. Ladd, Chemist and President of the Agricultural College, Agricultural College, N. D.
G. L. Flanders, Counsel for Dept. of Agriculture, New York, Albany, N. Y.
C. J. Kendle, Asst. Commissioner, State Board of Health, Guthrie, Okla.
Azor Thurston, Chemist of Dairy and Food Division of Ohio, Grand Rapids, Ohio.
T. L. Calvert, Chief of Dairy and Food Dept., Board of Agriculture, Columbus, Ohio.
J. D. Mickle, Dairy and Food Commissioner, 510 Worcester Bldg., Portland, Ore.
Wm. Frear, Chemist for State College, Center County, Pa.
Frank A. Jackson, Chairman of the Food and Drug Commission, State House, Providence, R. I.
Guy G. Frary, Food and Drug Commissioner, Vermilion, S. D.
A. Prestwick, Inspector of Food and Drug Dept., Summit, S. D.
Harry Lee Eskew, Food and Drug Commissioner of Tennessee, Nashville, Tenn.
E. A. Ruddiman, Prof. of Pharmacy, Vanderbilt Univ., Nashville, Tenn.
Heber C. Smith, State Dairy and Food Commissioner, State Capitol, Utah.
Benj. L. Purcell, Dairy and Food Commissioner, State Dept. of Agr., Richmond, Va.
Chas. F. Whitney, Collaborating Food and Drug Chemist, State Board of Health, Burlington, Vt.
George J. Weigle, Dairy and Food Commissioner, Madison, Wis.
E. V. McCollum, Prof. Agricultural Chemistry, Univ. of Wis., 1910 Adams St., Madison, Wis.
Chas. H. Hunt, Asst. State Chemist, Exp. Station, Pullman, Wash.
Carl Vrooman, Asst. Sec. of Agriculture, Dept. of Agr., Washington, D. C.



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 R. E. Doolittle, Chemist in Charge of N. Y. Lab., U. S. Dept. of Agriculture, Glen Ridge, N. J.
 L. M. Talman, Chief of Central Food Inspection District, U. S. Dept. of Agriculture, Transportation Bldg., Chicago, Ill.
 H. S. Bailey, Food Investigation Chemist, U. S. Dept. of Agriculture, Bureau of Chemistry, 805 Allison St., Washington, D. C.
 W. C. Henderson, Asst. to Solicitor, Dept. of Agriculture, Washington, D. C.
 B. H. Rawl, Chief of Dairy Div., U. S. Dept. Agriculture, Washington, D. C.
 W. Parker Jones, Asst. Chief, Bureau of Chemistry, U. S. Dept. of Agriculture, Washington, D. C.
 George B. Taylor, Market and Milk Specialist, Dairy Div., Bureau of Animal Industry, Dept. of Agriculture, Washington, D. C.
 James N. Currie, Dairy Chemist, U. S. Dept. of Agriculture, Washington, D. C.

Visitors.

Frank N. Smalley, Savannah, Ga.
 E. A. Jones, Emigration and Market Clerk, Dept. of Agr., Montgomery, Ala.
 James H. Wallis, Salt Lake City, Utah.
 Miss Helen Louise Johnson, Lecturer and Writer, General Federation of Women's Clubs, Watertown, N. Y.
 Louis Larson, Western Industrial Agent, Florida East Coast Railway Co., St. Augustine, Fla.
 R. E. Fogodon, Cincinnati, Ohio.
 Mrs. Guy G. Frary, Vermilion, S. D.
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 Mrs. F. E. Holliday.
 Mrs. M. J. Johnson, Bureau of Chemistry, Washington, D. C.
 A. W. Sharp, Chicago, Ill.
 Mrs. E. F. Ladd, N. D.
 Mrs. C. J. Tressler, Longwood Drive, Chicago, Ill.
 Chas. Wesley Dunne, Attorney for American Specialty Manufacturers' Asso., New York City, N. Y.
 R. M. Allen, Ward Baking Co., New York City.
 W. C. Whitman, Chemist, H. A. Johnson Co., 221 State St., Boston, Mass.
 R. E. Wilcox, Sprague, Warner & Co., Chicago, Ill.
 F. E. Holliday, Sec. Nat. Wholesale Druggists' Asso., 81 Fulton St., N. Y.
 C. O. Nelson, T. Roberts & Co., 116 South Front St., Philadelphia, Pa.
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 W. E. Stokes, Chemist for Royal Baking Powder Co., 135 Williams St., N. Y.
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 W. D. Strack, Director of Lab., Borden's Condensed Milk Co., 108 Hudson St., N. Y.
 L. S. Dow, Sales Manager, H. J. Heinz Co., Pittsburgh, Pa.
 G. F. Mason, Chemist, H. J. Heinz Co., Pittsburgh, Pa.
 W. C. Kirk, Attorney, Armour & Co., Chicago, Ill.
 J. R. Chittick, Chief Chemist, Jacques Manufacturing Co., 6400 Yale Ave., Chicago, Ill.
 A. V. H. Mory, Mgr. Scientific Dept., Scars, Roebuck & Co., Chicago, Ill.
 G. Lloyd, Chief Chemist, B. Heller & Co., 3925 Calumet Ave., Chicago, Ill.
 W. G. Sherer, V.-P. of Sherer & Gillette Co., Clark and 17th Sts., Chicago, Ill.
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 W. B. Cady, Chemist, Insular Exp. Sta., Rio Piedras, Porto Rico.

The Lighter Side of the Convention

IT was kept a secret. But it finally got out. Here it is. Professor McCollum gave John Newman two beautifully variegated vitamins. The little fellows were delightfully tame and docile and scampered about "too cute for anything" in John's room at the Statler. George P. McCabe gave it away.

The unknown bee got away from Dr. H. E. Barnard again this year. Remember, Doc, this was a Dairy Convention.

Professor Currie says a wet brick may have a limburger flavor. But who the devil wants to eat a brick? Wet or dry?

W. B. Barney believes in the present. Now, Gentlemen.

W. Scott Matthews performed like the scriptural

"thief in the night," the only difference being that the Carbondale chieftain passed out instead of in. He sure legged it for that Michigan Central.

Then John B. was free to act, at last! Alone at last!

Dr. Barnard didn't mean what he said about flavors. Some people never can take a joke.

The Suspender party of the opening session didn't reach its best until Sunny Jim Helme welcomed the boys to Michigan.

What was Peanut Jones thinking about, anyway? Did he really expect they'd give him the glad hand on top of that resolution? There had to be a victim and Jonesy has a slender neck. "Way Down in Mobile."

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Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

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Why was W. Scott Matthews in such a hurry to get away before election? The bulls were calling him. Perhaps.

Why does T. P. Sullivan take off his specks before making a speech? Tom says it's because he'd rather not have to look at his audience.

Dr. George Lloyd agrees with Commissioner Flanders that where there is limburger there is strength.

If only they hadn't appointed Peanut Jones on the Auditing Committee! That's where the blunder was made. But then, there's always the steam roller. Is it not so, Brother Farrell?

Welcome home to St. Paul, Brother John. You're a credit to the churn. My boy, my boy!

John Dear, are you through with the cream separator? Baby'll have to have clean clothes if we're going to the fair.

Johnny to Matty:

Oh, Matthews, dear,
I have a fear
There's something goin' to happen;
So get about
And hoof it out
So I can get my rap in.

Matty to Johnny:

Sure, Johnny dear,
I know your fear
Is solidly conditioned,
So off I'll sail
To Carbondale
To my mince pies goldarnitioned!

What was it Commissioner Matthews said assistant commissioners were for? He certainly put the word to deed when he hopped that southbound train incog.

A dairy chorister was overheard saying to C. J. Tressler, "What a good, kind soul that Mr. Farrell is—the one from St. Paul. I'd wager my moisture content that he's a deacon!"

Consellers Kirk, McCabe, Tressler and Newton secured season tickets for seats suspiciously near the door. Friend Kirk said he didn't like to interrupt the speaker whenever he found it necessary to leave services.

The entire Whereas family attended, including the spunky little fellows which John J. had packed all the way from St. Paul, only to see them spanked by Flanders and put to sleep in the committee cradle.

Doc. Lloyd says John Newman didn't have any tame vitamins in his room at the Statler. But he insists that John had an unknown Bee and that it stung him as he began the reading of Peanut Jones' resolution. However that may be, John was in evident distress.

Silence there between decks! 'Tis the redoubtable Tom Sullivan who speaks. Yes, Mr. Fricke, the itinerant ven—dor must go. (An itinerant ven—dor is sometimes called a peddler.)

In Carbondale, Ill.:

Teacher—Who is the greatest man in the world?

Little Johnnie Newman—Mr. Matthews!

Teacher—Why, Johnnie?

Little Johnnie Newman—" 'Cause he once fired a doctor who wouldn't make him a mince pie.

George P. McCabe says some people mistake sky-rockets for cannon and fire away before making sure. George sat around during the convention and watched a lot of the rockets go up—and "bust." Mac allows it was a right smart show for the money, but can't quite make out how such a mistake could be made in the choosing of munitions.

GROCERY BILL A HEALTH POLICY.

A ten-ton omelet cooked in an abandoned quarry is California's spectacular contribution to a pure food campaign, says the Elgin, Illinois, Courier. The eggs, which were decomposing, had been removed from their shells, packed in five-gallon cans, and put in cold storage. They were discovered by the bureau of foods and drugs, state board of health.

The incineration was part of a campaign pushed in consequence of 61 deaths from food poisoning in California in 1915. Altogether 1,000,000 pounds of putrid fish, meat, poultry, fermenting tomato puree, corn and chili peppers, and decaying fruits and vegetables have been destroyed in California this year.

But all of the spoiled food which should be cremated is not out in California. There are some unscrupulous dealers who will foist such stuff on the public, and by unreasonably low prices make business hard for honest and reliable dealers—unless somebody is eternally watching out.

Obviously, it becomes the housekeeper's duty to see that the grocer's bill is also a health insurance policy.

With the exception of ptomaine, most of the unwholesomeness of food betrays itself to both sight and smell. Housekeepers who discover food which is unfit for human consumption should not throw it into the garbage can, because that is the easiest way to get rid of it, not exchange it at the dealer's, because that is the economical way, but they should turn it over to the board of health.

The present high cost of living is partly due to the expense of modern sanitary methods. A certain per cent of every grocery and meat bill goes to pay for market cleanliness, for war on flies, white duck suits for clerks, and inspection and investigation by boards of health.

Housekeepers have every right, therefore, to look upon that percentage of food cost as a premium which they pay on a health policy. They should have no pity whatever on dealers who exact and collect the premium and refuse to return the insurance.

A presidential decree of March 2, 1916, in effect immediately, prohibits the importation into France of raw, refined, or powdered sugar of foreign origin or that shipped from foreign countries. The prohibition is not applicable to sugar imported by the government or to that for which the order was placed prior to February 1, 1916.

Beer Is Good Medicine

By Dr. John Dill Robertson, Commissioner
Department of Health.

AT THE banquet given to the International Congress at the Congress Hotel, October 20, 1911.—The Toast—The State of Illinois was responded to by Dr. John Dill Robertson, President of Loyola University Medical School, and Vice-President of the State Board of Agriculture and now Commissioner of the Department of Health, Chicago. Dr. Robertson said in part:

Let me relate an experience I had in Kansas, seventeen years ago. I was located in a little town called Bala, named for the great educational center of Bala, Wales. This town in Kansas was founded by a company of Welsh. They had picked out a spot along a small river that they thought would be a good place to live. They were not permitted the sole enjoyment of this community long, for soon a thrifty class of people located in this vicinity who had come from Germany. Kansas was a prohibition State and therefore it was difficult for these Germans, who had been reared upon beer, to obtain it readily, but this did not bother them because they had brought with them the process of making beer out of those things that grew upon their farms, and every German family had in their home beer of their own brew. This beer was extremely bitter. It was a noticeable fact that these Welsh who did not drink beer were subject to malarial fever and that the Germans who drank beer did not suffer with it. Having plenty of time on my hands, it being my first location, I made a study of this matter first hand and came to the conclusion that the only reason that the Germans were free from the malarial fever was because they did use the beer and the Welsh did not, and that the bitter principles found within beer was that which protected them from the malaria germ. Since that time, by operating upon dogs and removing their spleens, I have come to the conclusion that one of the functions of the spleen is to assist the liver in creating the bitter principle found in the bile, and this bitter principle is that which protects us not only against malaria, but other germs.

I want to congratulate you brewers, because your work is a scientific work; you have had to call upon the services of the greatest chemists and the greatest bacteriologists, and have studied with them and learned with them the great truth which has made it possible for you to make a beverage absolutely sterile, absolutely safe and which is many times superior and safer as a beverage than any drinking water in any of our municipalities or any of the milk, contaminated as it is with typhoid and bacteria in handling to reach the customers. While I do not desire to go on record as saying that beer will take the place of milk as a food, I do desire to congratulate you in attaining in your line what the surgical profession has attained in asepsis and antisepsis, or in other words, clean beer is to you what clean surgery is to us.

FOR CLEAN TOWNS IN UTAH.

It will be gratifying news to the many friends of James H. Wallis, former state food, dairy and sanitary commissioner of Idaho, to learn that he has again been selected by the state of Utah, through its board of health, to act as adjudicator of its "clean-town contest," an event that is now an annual affair in that state. This makes the third consecutive time Mr. Wallis has been thus honored, and it is certainly a signal recognition of his eminent fairness and competency, and shows unbounded confidence in his judgment.

In a recent magazine article, in which the *modus operandi*



JAMES H. WALLIS.

of this "clean-town" contest was exhaustively detailed, Mr. Wallis used the following trite statement in defining the term "clean town":

"The ordinary individual—one who has not participated in clean-town work—likely believes that a town would stand a good show of winning such a contest if its lawns were well trimmed, its streets clean, its houses painted and its rubbish properly disposed of. Those things are important, of course, but they are relatively the superficial things as compared to other features that must be immaculate in order to attain first division. Clean streets, painted homes and well trimmed lawns are the collars and neckties of a town. If a city wears clean outer raiment the chances are that it does regular bathing and frequently changes underclothing. But perhaps not. At any rate, the inside facts are the facts that count. The streets might be ever so clean, and yet if the water system were a poor one, or the sewage badly disposed of, or back yards, barn lots and outhouses full of filth, sanitary conditions would be nil. It would be an excellent place to see from a sightseeing car; a poor place to see from a garbage wagon, and, incidentally, a mighty poor place in which to live. You may live for a while in a dirty town, but it is a safe prediction you will not live there long. You will go away by one route or another. And doctors and undertakers are generally prosperous in such places."

Forest fires in British Columbia covered more than 300,000 acres during the past year.

SWIFT & CO. WILL EMPLOY SURPLUS.

The controlling interests in Swift & Co. are said to be not averse to an extra distribution on the shares, but regard the present time not favorable for making it, according to the financial columns of the Chicago daily papers. It is recognized that the enormous accumulation, being so rapidly augmented, belongs to the stockholders, but a goodly share, as usual, will be devoted to plant expansion and improvements. It is doubtful that the directors will consider any financing out of the ordinary this year. Unusual interest will be attached to the official statements to stockholders at the annual meeting early in January.

Packing prosperity promises to continue indefinitely. There is no letup in foreign demand, while the domestic consumption increases steadily. That applies to the byproducts no less than to meats.

FRAUDULENT INFANTILE PARALYSIS "CURES."

Officials of the Department of Agriculture charged with the enforcement of the Food and Drugs Act send out a warning to the public to beware of so-called "cures" or remedies for infantile paralysis. At the present time there is no known cure for this dread disease.

Unscrupulous persons take advantage of every epidemic to attempt the sale of worthless concoctions, taking advantage of the ignorance of the public on medical questions. A sharp watch will be kept for this species of fraud, but the people are warned that the federal law applies only to goods shipped from one state to another. On any medicine made and sold in the state where it is manufactured the state officials are the only authorities who have the right to interfere. But the fact, as stated as above, that there is no cure known to medical sciences should put the public on guard against fraud in this particular.

ICE CREAM CONVENTION IN ATLANTIC CITY.

Its most important and largest convention in recent years will be held by the National Association of Ice Cream Manufacturers in the Royal Palace Hotel, Atlantic City, on October 10, 11, 12 and 13. The Pennsylvania Association of Ice Cream Manufacturers will join in the general meeting, but will hold its business sessions on October 9 in the same hotel.

It has been the policy of the National Association to visit different parts of the country, and last year the convention was held in Los Angeles. The meeting there was a good one, but the greatest crowds are always present when the meetings are held in the East. There is a logical reason for this, because two-thirds of the ice cream eaten in the country is made east of Illinois and north of the Mason and Dixon line. The oldest businesses are to be found in this section, and as the consumption of ice cream is more or less a habit it only is natural that the bulk of the output is made in the section mentioned.

The wholesale manufacture of ice cream has made great strides in the last decade, but it still is a business dependent upon warm weather for the increase of output. For the last three years there have been cold and rainy springs and the early summer has not been favorable for large output. That was the case this year, but it is safe to say that since the first of July the consumption of the national delicacy never has been approached. With a long spell of torrid temperature all over the country, the supply has been insufficient for the demand. The factories could have done more business but for the fact that the ice supply was inadequate and there was a shortage in cream and milk just when it was needed most. The dairy industry should count the ice cream industry as a true friend, for the ice cream man pays more for butter fat than any other customer.

This year probably will go down in the records as better than any since 1911, which was an exceptional year, and when the records are made up by the industry's statistician, L. O. Thayer, it will not be surprising to find that nearly 200,000,000 gallons of ice cream and ices have been sold in 1916. Probably 200,000 cows were needed to take care of this output. When it is considered that the investment for strictly wholesale plants alone represents more than \$100,000,000 and the labor bill reaches nearly \$75,000,000, it will be seen that the ice cream industry is no small item in the country's prosperity. While many call ice cream a luxury, there is room for argument, for the favorite hot weather dish is also a food and a cooling agent. It is used as a dessert universally, and as the price is lower than for other foods containing less sustenance—to say nothing of the beneficent cooling effect in the heated term—it can be argued with a certainty that ice cream is almost a necessity in this country.

Libby's

for the
Hostess

Libby's tasty, ready-to-serve foods are a source of delight to the particular hostess. She serves her guests with dainty, delicious refreshments without exhausting herself by kitchen work.

Prepared in immaculate white-tile kitchens, Libby's foods are truly ready to serve.

Surprisingly economical.

Libby, McNeill & Libby, Chicago



Every month these ads are working for you.



Washington D. C. News Letter



WASHINGTON, Aug. 31.—Every manufacturer and every distributor of human food products between the Atlantic and the Pacific and between the Canadian line, the gulf and the Rio Grande, either in person or by representative, gathered here in Washington on Aug. 14 and remained until the end of that week, yelling at the Interstate Commerce Commission in protest against advances in railroad rates proposed by the transcontinental rates, to become effective Sept. 1. Never in the history of the regulation of railroad rates and charges by national authority were so many food manufacturers in attendance on such a matter. They asked for a suspension of the higher rates pending investigation and got it, in part.

The wholesale grocers and confectioners came so near monopolizing the time of the suspension board of the Interstate Commerce Commission that on Friday, Aug. 18, representatives of the iron and steel interests let out a protest against the grocers. The iron and steel men wanted to know whether the grocers and the fruit and vegetable canners and driers, not to mention the confectionery men, intended to use up all the time, or whether they intended to give other interests just a small opportunity to say what was on their chests.

Dozens of wholesale grocers and canners took the witness stand to tell their troubles. Many of them repeated what predecessors had said, which, of course, was unnecessary, not to say irritating. But the representatives of other interests forgave the food men, because they knew the food men were terribly wrought up and up against an experience which few of them had ever before had.

And what was it all about? Simply an effort on the part of the railroads that bring California products East and carry New York, New England and South Atlantic products to points west of Chicago to charge so much more than they are charging now, that not a shipper who will be affected could temperately characterize the effort. In brief, the facts which drew the fire of the protesting food men are these: At present it costs 40 cents per 100 pounds to bring canned goods from San Francisco to New York, or to any point between those two cities, by rail to gulf ports and water-and-rail from those ports to destination. To have the same sort of goods carried all rail costs 62.5 cents per 100 pounds. On Aug. 1, the transcontinental railroads proposed to abolish the 40-cent rate and the 62.5-cent rate and substitute for them an 85-cent rate to any point east of the Rocky mountains. To points west of them the rate from California is to be something less than 85 cents. The 40-cent rail-and-water rate is to remain on paper, but for practical purposes it is to be abolished. As now published, it is available, in theory, only when the railroads have ships available. But even that limitation has amounted to nothing, because for six months or more there have been embargoes on shipments of canned goods on that 40-cent rate. That is, the Southern Pacific and the Santa Fe have formally notified their agents to accept nothing on that rate, because they have neither cars nor ships. That is why it was hereinbefore asserted the proposal was to abolish the 40-cent rail-and-water rate. It is to remain on paper, but that is all.

The grocers, canners of vegetables and packers of fish and pineapples said the advances, proposed for Sept. 1, would be exceptionally unjust, because they would be made after the grocers had made contracts with the canners and packers for this year's business. The contracts were made in January or somewhat later and shipments will begin after Sept. 1. John H. McLaurin, president of the Southern Wholesale Grocers' Association, said the direct and irreparable loss to the members of that association from whom reports had been received would amount to \$560,000 alone.

Some of the railroad lawyers suggested that the making of contracts for the delivery of canned beans, for instance, before the beans were planted, was gambling in futures, no bet-

ter than selling cotton before the seed has been planted. That roiled the grocers to angry protests. Vice-President Paine of the Southern Association denounced the insinuation as unworthy of men supposed to be dealing with a serious matter. He said every business on earth is done in the same way and that this was the first time the railroads had ever proposed advancing the rates between the time of making contracts and the delivery of the goods. In every other instance, the railroads had made the proposals in January or had given timely warning of a desire to try for advances.

While the 40-cent and the 62.5-cent rates were those usually mentioned, they are not the only ones involved. On the contrary they are merely the foundation rates. While canned salmon and canned tuna may be canned goods to grocers, they are separate and distinct articles to the traffic manager of a railroad. But every kind of canned goods bears some sort of relation to the 40-cent rail-and-water rate or the 62.5-cent all-rail rate. The grocers figured out their prospective losses pretty well, but W. W. Manker, traffic manager for Armour & Co., the meat packers, who has had much more experience in such matters than the grocers, was able to tell the suspension board exactly what the proposed rates meant in the way of increased charges, stated in percentages. He said the proposed rates on canned fruits and vegetables, all-rail, will be 36 per cent; rail-and-water, 112½ per cent; canned salmon and tuna fish, 41½ per cent, and dried fruits, 22 2/9 per cent. On the 62.5-cent all-rail rate on canned fruits and vegetables, the carriers now get a revenue of \$375 per car and under the proposed rate they would get \$510. On a rail-and-water rate shipment the increase would be from \$240 to \$510 per car.

J. V. Norman of Louisville, as attorney for the wholesale grocers of that city and Jacob Zinsmeister, as a witness for them, got the first opportunity to thump the proposal to take money from the grocers through an unusual way of asking for advances. Norman said either the railroads, who have been fighting among themselves, put in tariffs so ludicrously unreasonable as to force the commission to suspend them and thus leave the situation as it is, or if the commission would not suspend them, so high that the railroads would make a big pot of money.

Mr. Zinsmeister said the agents of the transcontinental railroads, after the decision in the Spokane Merchants' Association case, which caused the uproar, appeared before the Louisville grocers at a luncheon arranged by him and said they did not intend to advance rates. He gave the names of a Southern Pacific and a Union Pacific man who made the statements. After the tariffs proposing the advances were filed on Aug. 1, these agents sent around circular letters prepared by those higher up saying the advances were made because the Interstate Commerce Commission had decided they would have to do so.

Many of the grocers asked for the postponement of the effective date of the tariffs to Jan. 1, by which time the existing contracts will have been filled. That was the position taken by F. A. Alpin of the National Caramel and Dried Fruit Brokers' Association. Men more experienced in the work before the commission tipped it off to the grocers and other food men that that was not a good attitude to assume before the commission, because it amounted to a declaration by those making it that they were not concerned in having reasonable rates, but merely to have the unreasonable rates postponed until they had got rid of the contracts based on the older and lower rates.

Walter B. Timms of Austin Nichols appeared for the National Wholesale Grocers' Association. He and F. T. Gregson, for the tuna packers at Los Angeles, F. M. Hill for the raisin interests around Fresno, George M. McClellan for the Honolulu chamber of commerce, and A. C. Baumgartner of the Hawaiian Pineapple Packers' Association used up practically the whole of the afternoon of Aug. 14. J. J.

THE PUREST OF FOOD PRODUCTS

Beer is the purest and cleanest of all food products. Every grain of barley or other cereal; every hop leaf, is most thoroughly freed from dust and other foreign elements, and every stage of manufacture, from malting to barrelling or bottling, is most carefully guarded, for the introduction of the slightest impurity would be fatal to a brewing. Every drop of water employed is distilled, every pipe or container sterilized. Even the air is filtered. No possible precaution against contamination is neglected. The liquid which, ultimately becomes beer, must be frequently tested, but it is never dipped out of tank or vat; it is always drawn off. The brewer was the first manufacturer of a food product to ask for a pure food law.

“Beer is one of the foods free from bacteria. You might be afraid of milk, but the method of making beer, drying, heating, pasteurizing and filtering it, completely frees beer from bacteria. Beer is a food and wholesome; it contains carbohydrates and albuminoids and mineral materials required by our system; it is appetizing; it aids digestion; it has enzymes.”—*Charles F. Chandler, A. M. Ph. D., M. D., Sc. D., Professor Organic Chemistry, Columbia University.*

“The milk and butter men ought to go in a body and visit the breweries of this or other States in order to see how clean a food producing establishment can be made. It is a fact that the cleanest and most sanitary food on the market, as food is defined by the Indiana law, is beer.”—*H. E. Barnard, State Food and Drug Commissioner of Indiana.*

Reynolds submitted figures on behalf of the salmon packers, showing the advances would hurt them to the extent of about \$1,000,000 on the 4,000,000 cases they expect to ship this season.

H. C. Barlow of the Chicago Association of Commerce and the Wisconsin Wholesale Grocers' Association discussed the subject from the point of view of the order of the commission which the railroads told the shippers had forced them to raise rates. Politely he pointed out that that assertion is a lie, with a profane prefix.

The railroads had claimed that the 85-cent rate with a 60,000-pound minimum is a restoration of an old rate. Mr. Barlow said there was once an 85-cent rate, but a man had to ship only 40,000 pounds to get the benefit of it. He wanted to know whether it was a "restoration" to say a man must ship 60,000 pounds in a car as a condition precedent to getting the 85-cent rate. But he was not content to do that. He pointed out that on May 16 of this year the railroads proposed a rate of 75 cents, 40,000-pound minimum, more than two weeks after the testimony in the trouble-making Spokane case was closed. H. G. Wilson of the Toledo Board of Trade, speaking for the wholesale grocers of Ohio, Indiana and Michigan, endorsed everything Mr. Barlow said. Harry E. Sloan for the wholesale grocers of Kansas City as a body and for the wholesale grocers' associations of Missouri and Kansas, made a witness who compelled attention. He said the wholesale grocers know they have been hurt, but they wanted the board to suspend the proposed advances to enable them to find out why the gaff had been thrown into them. He jeered at the suggestion that the grocer's way of buying canned goods is dealing in futures. Somebody asked him if the wholesaler cannot sell his product so as to make the price fluctuate with the freight rate. He said it could not be done, because there are so many places a man may buy goods that that would be sheer nonsense.

"You might as well quit business and get a government job as to try to do it in that way," said Mr. Sloan. "These advances are on food products," said he, looking at the members of the board. "Remember that. The advances probably do not mean much to the boot or shoe man, but 7 cents a dozen on California canned goods means a lot to a food distributor. It means ruin to some and serious damage to others. Food distributors do business on a smaller margin of profit than any other class of business men in the world. Everybody, except the railroads, knows that."

Martin Van Persyn of Sprague, Warner & Co. presented a mass of figures on the subject and protested in every way he could imagine against the advances.

Frank E. Gorrell, secretary of the National Canners' Association, which he said has among its membership those who furnish 75 per cent of the canned goods produced, protested against both east and west bound advances, because the canner of sweet corn in Maine was in the same boat as the canner of beans in California. Californians buy sweet corn in Maine in January and deliveries begin in October. He said it was tommyrot to suggest that there is any feature of gambling in such contracts, unless the element of gambling is that furnished by the "midnight tariffs," such as were before the board at that time. A complete suspension of all the tariffs to Dec. 30 was ordered by the Interstate Commerce Commission on Aug. 30. Even those schedules as to which the preponderance of proof showed compliance with the technical language of the Spokane Merchants' Association case were hoisted by the order of the commission.

The grocers, canners and packers, therefore, will have an opportunity to fill this season's contracts under the rates prevailing at the time they were made. However, it will not be safe to assume there will be no advance next winter, unless, of course, in the improbable event of the war's termination and the restoration of ships to the coast-to-coast business. If the ships come back to the canal trade, there will be no advance, unless the carriers come to the conclusion they will ignore the trade taken from them by the ships. That, however, is such an improbable policy that it is safe to say if the ships come back there will be no advance. If they do not, everybody concerned should be prepared to pay higher rates

on goods they buy from Pacific coast canners and packers. The food men attending the hearings, who took the trouble to register, are: J. V. Norman and Jacob Zinsmeister, Louisville wholesale grocers; A. H. Beckmann, secretary National Wholesale Grocers' Association; Herbert C. Smith, Detroit grocers; S. J. Campbell, Lee & Cady, Detroit; B. D. Cushman, National Grocery Co., Detroit; Raymond P. White, E. S. Sergeant, Chas. H. Carlandson and H. R. Halrechdy, New York Dried Fruit Association; Fred L. Kleebacker, Pittsburgh merchandise brokers; Charles L. Jones, S. J. Moffatt, W. F. Danaberry and Thos. C. Jenkins, Pittsburgh Wholesale Grocers' Association; W. T. Kirk and H. A. A. Daily, Philadelphia Grocers' and Importers Exchange; Walter B. Timms, National Wholesale Grocers' Association; R. C. Carmen, Wholesale Grocers and Merchandise Brokers of Kansas City; A. M. Graves, Pennsylvania, New Jersey and Delaware Wholesale Grocers' Association; J. H. McLaurin, Southern Grocers' Association; C. E. Bateman, New England Confectioners' Club, Boston; Ewing Cain, Hershey Chocolate Co.; W. C. Lindsay, National Confectioners' Association, St. Louis; J. J. Paine, Memphis, Southern Wholesale Grocers' Association; R. G. Bursk, Samuel Howe Wholesale Grocery Co., and James Hewitt, individuals and Pennsylvania, New Jersey and Delaware Wholesale Grocers' Association; Wm. B. Dudley, Dried Fruit Association of New York and National Canned Goods Association; S. H. Chambers and Victor A. Leggerman, same; R. B. Williamson, for Graham Grocery Co., Huff, Andrews & Thomas, Flat Top Grocery and Bluefield (W. Va.) Grocery companies; L. R. Bishop, San Francisco, fruit shippers; Z. T. George, Dried Fruit Association of California; F. A. Alpin of New York, F. A. Base of Pittsburgh, W. B. Dudley of New York and T. J. Meehan of Baltimore, National Canned and Dried Fruit Brokers' Association; M. Carter Hall, Pacific Fisheries; Frank E. Gorrell, secretary National Canners' Association; G. S. Maxwell, North Texas Wholesale Grocers' Association; A. C. Baumgartner, San Francisco, for Hawaiian Pineapple Packers' Association; James G. Melvin, California Fruit Canners and Canners' League of California; P. W. Coyle, St. Louis wholesale grocers; Alva Milligan, Springfield, Mo., for Missouri and Kansas Wholesale Grocers' Association; W. A. Cox, Norfolk, Virginia, wholesale grocers; T. E. Jamison, Roanoke, Virginia, grocers; W. M. Holland, Indianapolis, for Van Camp Products Co.; W. W. Manker for Armour & Co.; G. A. Page, New York, Borden's Condensed Milk Co.; George R. Crowell, Dried Fruit Association of New York; Thos. S. Vallette, New York State Wholesale Grocers' Association; John C. Smith, Indianapolis Fancy Grocery Co.; Herbert Sheridan, Canned Goods Exchange of Baltimore; C. A. Rosemond, Illinois Wholesale Grocers' Association; Francis J. Rickert, Wisconsin Wholesale Grocers' Association; W. P. Tingley, Huntington (W. Va.) grocers; O. L. Owen, New Mexico Wholesale Grocers' Club; R. D. Springer, South Dakota Wholesale Grocers' Association; W. D. Emil, T. A. Snider Preserve Co., Chicago; C. F. Healy, Carnation Milk Products Co., Seattle; H. L. Birch, wholesale grocers of Lexington, Ky.; C. R. Hillyer, Cudahy Packing Co.; Clarence E. Hanscom, secretary Executive Association of Wholesale Grocers of New England; W. M. Flanders, Boston Wholesale Grocers' Association; Luther M. Walter, Morris & Co. and Wilson & Co., packers; R. E. Hills, Columbus, Ohio, wholesale grocers; George M. McClellan, Honolulu Chamber of Commerce; Martin Van Persyn, Wholesale Grocers' Exchange of Chicago, and Sprague, Warner & Co.; E. H. Draper, Iowa-Nebraska Wholesale Grocers' Association and Iowa Canners' Association; Paul E. Kroehle, Cleveland Wholesale Grocers' Association; A. L. Griffith, American Can Co.!!!; Lyman F. Martin, Weideman Co., Cleveland; George A. Jones, the Wm. Edwards Co.; W. M. Briggs, Gilbert Grocery Co. and Ohio Wholesale Grocers' Association; Harry B. Bryan, Baltimore Wholesale Grocers' Association; Payton Grimes, Wholesale Grocers' Association of Richmond, Va.; C. B. Mowen, Fort Smith, Arkansas Wholesale Grocers' Association; W. V. Hardie, Oklahoma Wholesale Grocers' Association.

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To produce pure wholesome candy, truthfully labeled, under sanitary conditions, and to assist others in doing the same.

To promote uniformity between State and National Laws and Rules and Regulations governing their enforcement.

National Confectioners' Association of the United States

LOUIS KUHN, President WALTER C. HUGHES, Secretary V. L. PRICE, Chairman

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"NEW NAME IN PURE FOOD PRODUCTS."

On July 27 the "new name in pure food products" flashed into life. That morning by a completely prearranged plan, the signs on every plant, branch, agency and other distributing center of Sulzberger & Sons' Company were changed to read "Wilson & Co." For weeks the preliminary work of preparing the signs had been under way, and arrangements were also perfected to substitute the new name for the old one on the walls of the plants and branches. Changing the name of a small concern is simple enough, but in the case of a world-wide organization such as this, the detail work is enormous.

Thomas E. Wilson, who became president of Sulzberger & Sons' Company some months ago, is one of the leading



THOMAS E. WILSON.

figures in his business. His rise from the position of office boy to that of president of an institution capitalized at many millions of dollars and today transacting a business which represents millions in volume, is attributed to his capacity for hard work and his ability to spur his associates to hearty co-operation.

"The success of the Sulzberger organization need not be commented upon," said Mr. Wilson. "Their first plant opened over 50 years ago in New York. Today the company has large packing plants in seven different cities in this country, also packing plants in South America; the principal plant now being located at Chicago, the headquarters of the company. The growth of the company during the past fifteen years has been very rapid, the sales having increased to over \$100,000,000 annually. The new organization will maintain all the high standards of the old one, and will add to them the enterprise and ambition of the live, energetic men who were eager for the opportunity now afforded them.

"Our policy is to make the Wilson label the synonym for pure food products, whether meats or other foods. Our plants are scrupulously clean and sanitary; we are rigid in our enforcement of our own regulations in this respect, and the U. S. government inspection adds a further guarantee to our own.

"The big problem in the meat industry is one of supply. The

government reports sent out by the Department of Agriculture point out that meat production all over the world has not kept pace with the increase in population. The supply of livestock must be increased. We will co-operate with stock raisers; we want to see stock raised in every farming district. With the vast experience of our organization we should be able to bring about a betterment of this condition. Our idea is to continue to build this organization into a bigger and broader public institution.

"We know that the road to success in this business is keeping the consumer in mind at every step. Expert selection of live stock is the first step. Inspection after inspection, with the most careful packing and handling, are followed by shipment in our own refrigerator cars and prompt delivery to the dealer through our distributing branches."

The well known "Majestic" brand of hams, bacon, lard and other products, will be continued by Wilson & Co.

LEGAL LABELS FOR JAMS AND PRESERVES.

The Illinois State Food Standard Commission announces that it has received several requests from individuals, clubs, and associations, to be heard on the question of percentages in relation to the labeling of jams, jellies, and preserves, and has decided to hold another public hearing on the subject some time in October, 1916, the exact date to be announced later.

The discussion will be confined strictly to the proposition of a declaration of percentages of all ingredients used.

All persons wishing to file briefs may do so, but all briefs will be read at the hearing, for the purpose of discussion.

PUBLIC HEARING ON MUSTARD SEED.

A public hearing as to the meaning of the term "mustard seed" and the appropriate designation of the varieties of "rape seed" for the purposes of the Food and Drugs Act will be held in Washington, D. C., on September 15, 1916, by representatives of the Bureau of Chemistry, U. S. Department of Agriculture. All persons interested are invited to attend. Those who desire may present their views in writing to the Bureau of Chemistry, Washington, D. C., on or before the date set for the hearing. It is desired to obtain all possible information from the trade and others on the subject.

The hearing will be held at 10 a. m. on September 15, 1916, at 216 Thirteenth street, S. W., Washington, D. C.

"MILK AND ITS HYGIENIC RELATIONS."

BY JANET E. LANE CLAYTON, M. D.; D. SC.
Longman Green & Co., London, 1916.

This work, published under the direction of the Medical Research Committee, organized under the National Insurance Act of Great Britain, should be in the library of every health official. This means it should be accessible to every State Food Commissioner who in many of his activities is actually a health officer. The work contains no record of original investigation nor does it pretend to. It is merely a systematic compilation and summary, in common rather than technical language, of all that has been learned of human and cow's milk in its hygienic relations—a survey of existing knowledge on the subject gathered from the literature of many peoples printed in different languages. Accompanying the text also is a most complete bibliography. The author does not give much space to the composition on nutritive properties of milk nor to the metabolic utilization of normal milk in the human body. Little consideration also is given to standards of composition and quality of cow's milk. Methods of analysis are ignored. Considerable attention is given ferments and enzymes, substances concerned in production of immunity, and in the cellular content of milk. Breast vs. bottle feeding; the relative value of boiled and raw milk in the same and different species; the relation of raw and heated milk to diseases in infants, the latter in its supposed relation to Barlow's disease and in rickets, and the former in connection with tuberculosis and other milk borne epidemics are exhaustively handled. A few chapters are devoted to the production of milk free from contamination; methods of pasteurization, sterilization, bottling and general handling of milk in the dairy and depot. A chapter also is devoted to the contamination of butter and cheese and impure milk and cream. The work is well but not profusely illustrated. The printing and arrangement are good, but the paper and binding inexpensive, thereby reducing the cost to produce and sell.

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Expert Staff of Consultants. Court and Medico-Legal Work.****EDWARD GUDEMAN, Ph. D.****Consulting Chemist and Engineer****Scientific Expert Before the Courts****CHICAGO, - - - ILLINOIS****NATURAL FRUIT FLAVORS****FOR USE OF MANUFACTURERS****C.X.C. LEMON, C.X.C. ORANGE, C.X.C. LIMES****Soluble, Concentrated, Terpeneless****FOOTE & JENKS, Sole Mnfrs., Jackson, Mich.****Victor Chemical Works****New York Chicago St. Louis****Phosphates, Baking Powder
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Notes from Field of Food Control



ON THE PASTEURIZATION OF MILK.

That there is no valid objection to the pasteurization when properly performed and that the process makes safer even the most carefully handled and inspected milk, is the conclusion of a new professional paper of the Department of Agriculture, in which are set forth the most recent conclusions of scientists in regard to this matter. It seems probable, says this paper, that within the next two years a large proportion of the milk supply in the large cities will be pasteurized. There is already a marked tendency in this direction. About ten years ago only 5 per cent of the milk supply of New York City was pasteurized. In 1914 88 per cent was treated in this way. At the present time 80 per cent of the milk supply of Boston is pasteurized, and there are corresponding increases in many of the smaller cities.

Before the value of pasteurization as a hygienic measure was as well recognized as it is today, it was practiced in secret by a number of milk dealers as a means of preserving milk and preventing it from souring. Its commercial value in this respect is undoubtedly great, but its chief function is the destruction of disease-producing organisms. Proper pasteurization should destroy about 99 per cent of all the bacteria in the milk, although when the bacterial count of the raw milk is low the reduction may be somewhat smaller. The efficiency of the process, it is pointed out, cannot be based on the per cent, but rather on the character of the bacteria destroyed.

The kinds of bacteria that remain alive after pasteurization depend on the temperature to which the milk is heated and the species of bacteria which are in the raw milk. Three processes of pasteurization, known respectively as the flash process, the holder process, and pasteurization in the bottle, are now practiced in this country. In the flash process the milk is raised quickly to a temperature of about 160° F. or more, held there for from 30 seconds to a minute, and then cooled quickly. In the holder process the milk is heated to a temperature of from 140° to 150° F. and held there for half an hour. When pasteurization in bottles is practiced, the raw milk is put into bottles with water-tight seal caps, which are immersed in hot water and held for from 20 to 30 minutes at a temperature of 145° F. In this way the pasteurized milk is not subjected to any danger of reinfection. On the other hand, the seal caps must be absolutely tight and this involves increased cost. In general, it may be said that the holder process is coming into greater favor than either of the others. This process permits of the use of lower temperatures which, for various reasons, is highly desirable. Another method of pasteurization, or rather a modification of the present holder process, suggested by the Department investigators, is that of bottling hot pasteurized milk. The process consists in pasteurizing milk by the holder process at 145° F. for 30 minutes, then bottling it while hot in hot bottles steamed for 2 minutes immediately before filling. After filling, the bottles are capped and may be cooled by any of the systems in which the caps are protected. The bottles are sprayed with water or cooled by forced-air circulation.

When milk is held at 145° F. for 30 minutes, all the disease-producing bacteria, so far as can be ascertained, are completely destroyed. At the same time a larger percentage of the bacteria that cause milk to sour and a smaller percentage of those that cause it to rot are left than when a higher temperature is employed. Pasteurized at a low temperature, milk undergoes no change which affects its nutritive value or its digestibility. Subjection to a temperature of 150° F. or more, however, does result in certain chemical changes. Finally, pasteurization at low temperatures is more economical because the expense of heating and cooling is less.

This, of course, does not mean that insufficient pasteurization should ever be tolerated. As a matter of fact, the process of pasteurization is frequently performed improperly. For the holder process, 140° F. is the point at which investigations have shown that disease-producing bacteria are killed, but in practice it is advisable to use a temperature several degrees above this minimum of safety. When the flash process is used, investigation has shown that very many dealers fail to heat the milk to a sufficiently high temperature. This appears to be another argument for the use of the holder process, although conditions in this respect are said to have been improved greatly in recent years.

Another common defect in the process of pasteurization is carelessness in the handling of the milk after it has been treated. As has been said already, this is one reason why pasteurization in bottles is advocated. One false step in handling the milk after it has been pasteurized will undo all the good effects of the process. The milk should be cooled as rapidly as possible to about 40° F. and kept at that temperature until delivered. If this is done, there is only a slight bacterial increase during the first 24 hours. It has been held by some investigators that bacteria grow faster in pasteurized milk than in raw milk. This point, however, has never been thoroughly established and other investigations indicate that the rate of increase is approximately the same.

Another objection that has been raised to pasteurized milk is that the bacteria which cause it to sour are destroyed and that without their restraining action the putrefying organisms which survive form toxins and putrefactive products in the milk. As has been pointed out, this is true only of milk that has been pasteurized at a high temperature. As a matter of fact, the bulletin concludes, pasteurization by the holder process is today the most effective means of obtaining safe milk. This is especially true of cities which consume such great quantities that thorough inspection is almost impossible. New York City, in 1912, for example, used 2,500,000 quarts a day. This was furnished by about 350,000 cows and some of it was transported more than 400 miles. One hundred and twenty-seven thousand persons, it was estimated, were engaged in handling it. Under such circumstances pasteurization is a necessary precaution. It is, however, to be regarded not as a substitute for, but as a supplement to, care and cleanliness in the production of milk.

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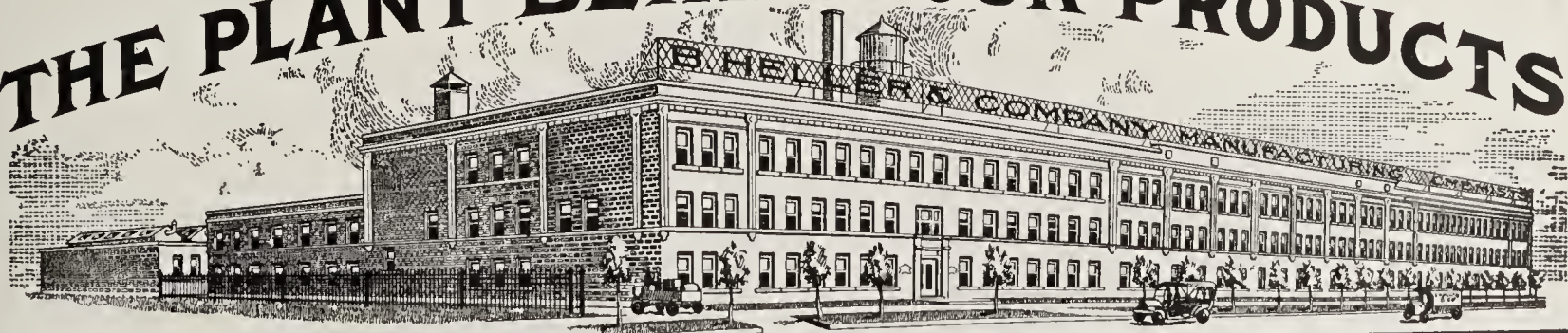
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THE FIGHT FOR PURE FOODS.

At the recent meeting of the Ohio State Cannery Association L. G. Bingham, state cannery inspector, insisted that pure food laws are a good thing and have done much to protect the public from deleterious foodstuffs and honest packers from unfair competition.

To illustrate what was common before the era of pure food laws he gave two recipes which within his knowledge were used by manufacturers in the 'eighties of the last century. The first was as follows:

Two buckets of dried apples, four buckets of canned, or pulped pumpkin, two buckets of glucose, half ounce of tartaric acid, cook in a jacket kettle until the apples were cooked soft, then seasoned with oil of cinnamon and nutmeg and a little clove; and, lastly, preserved with salicylic acid, then packed in wooden buckets and labeled "Pure Apple Butter."

And here was the other:

One barrel of apple pulp, one barrel of pumpkin pulp, one barrel tomato pulp, or tomato water, cooked and seasoned as before and preserved with salicylic acid.

To uninitiates the second might seem like unto the first; but the product of the second recipe was dyed a rich red with artificial coloring matter and labeled and sold as "Tomato Catsup." The speaker went on to say that while purity requirements must be met at the present time there are devices sometimes resorted to for the purpose of lowering the cost of production that while they may give unscrupulous manufacturers a temporary advantage are rightfully resented by consumers and in the end are injurious to the trade. Illustrating what he meant, he proceeded:

Chief among these abuses is that of allowing such crops as peas and corn to mature until they become tough, hard and unpalatable, then paying the grower for them by the ton in this dry state, which cheapens first cost of raw material; then soaking in water, as is done with peas, or adding much larger content of water to the can, as is done with corn. This does materially cheapen the product and still leaves it in conformity, and when he buys one of these cans thus filled with unpalatable, dry, tasteless stuff, would resort to another brand and leave this junk on the shelf while he cleaned the shelves of the luscious, nourishing foods. But, unfortunately, in the majority of cases it does not work this way. The good housewife, being disgusted, cuts canned foods from her menu for months, and in many cases for the whole year, this cutting consumption very materially.

He also referred to "light fills," another device for cheapening the product and getting ahead of the consumer, which is under the ban of law but still is practiced to some extent. Then he observed—and it is the truth—that the men who engage in these dishonest practices are pirates, and that the only reason why they are able to flourish is that the larger proportion of the goods placed upon the market are luscious, palatable and nutritious. In the canning industry as in all other business, honesty is the best policy. It behooves organizations of canners to do their best to conserve the interests of the consumer, not only by maintaining a high standard in their own output but by helping to expose the cheats. In the fight for pure foods the interests of honest manufacturers are identical with those of the consuming public.

SAFEGUARDING MEAT SUPPLY.

More than 58,000,000 meat animals were slaughtered in establishments under Federal inspection during the fiscal year ending June 30, 1915. Since approximately from 58 to 60 per cent of the animals killed in the country are slaughtered in establishments where Federal inspection is maintained, it appears that about 100,000,000 meat animals are now being killed each year in the United States.

Of the animals subjected to Federal inspection 299,958 were condemned as unfit for human use, and 644,688 were condemned in part. Thus a little more than 1½ per cent of all the animals inspected were condemned either in whole or in part. These figures include only cattle, calves, sheep, goats and swine.

Tuberculosis was the chief cause of the condemnations. More than 32,644 carcasses of cattle and 66,000 carcasses of swine were entirely rejected on account of this disease, and in addition parts of 48,000 cattle and 440,000 swine. Hog cholera was responsible for the next largest loss, nearly 102,000 swine being condemned entirely on this account.

The annual appropriation for the Federal Meat Inspection Service is now about \$3,375,000, so that the cost to the people would be between 5 and 6 cents per animal if the service was confined entirely to the inspection of the animals and carcasses. In addition, however, great quantities of the meat and products are reinspected. In this item there was a very considerable increase during the last fiscal year, the reinspection resulting in the condemnation of a total of nearly 19,000,000 pounds of products of one kind or another. Furthermore, 245,000,000 pounds of imported meat or meat products were inspected and more than 2,000,000 pounds condemned or refused entry.

In the course of its work, the Bureau of Animal Industry, which is in charge of the meat inspection service, has discovered a new method of destroying trichinae in pork, which is an additional safeguard to human health. Refrigeration at a temperature of 5 degrees F., or lower, for a period of 20 days will destroy these parasites which occasionally give rise in human beings to the serious disease known as trichinosis. Hitherto the only known safeguard against this disease has been thorough cooking of all pork and pork products, and those persons who neglect this precaution have always been more or less exposed to the danger. Unless pork is known to have been subjected to refrigeration as above indicated it should be thoroughly cooked. The microscopic examination of pork for the detection of trichinae has been abandoned as the usual methods have proved inefficient.

In this connection it is interesting to note that more swine were slaughtered in the past year in establishments under Federal inspection than ever before. A total of 36,247,958 were inspected at the time of slaughter and approximately 35,900,000 passed for food.

ORIGINAL PACKAGE OPINION.

In an official opinion given by Attorney General Hargest of Pennsylvania to Food Commissioner James Foust, the State's legal department flatly disagrees with the United States Supreme Court as to what is an "original container," and therefore dissents from the interpretation of the famous McDermott and Weigle cases, which would preclude the State food authorities from seizing goods which are illegal under the State law, but legal under the Federal law.

The question which produced this ruling from the Attorney General was submitted by Commissioner Foust as follows:

If a box containing two or more dozen bottles of catsup, properly sealed and labeled in conformity with the National Food and Drugs Act of June 30, 1906, and shipped from another State to a retail merchant in Pennsylvania, is opened and the bottles placed upon the shelves of the store for sale, and upon purchase by an agent of this department and on analysis, the catsup is found to violate the pure food laws of this State, can the Pennsylvania laws be enforced?

The Attorney General quotes at length from the rulings of the court in the cases mentioned, and then concludes substantially as follows:

"Your inquiry and the correspondence submitted are the result of a misconstruction of the case of McDermott vs. Wisconsin. The impression prevails since the opinion in that case, that a state cannot enforce its pure food laws against single, sealed packages of food misbranded or adulterated, according to State laws, if such single packages comply with the provisions of the National Food and Drugs Act of June 30, 1906. This impression is not justified by the decision itself. The precise questions in that case were:

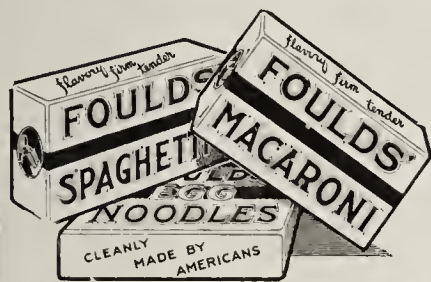
First—Whether the word "package" as used in the Food and Drugs Act was limited to "original package" as understood in interstate commerce, or whether it included the goods upon the shelves of a local merchant for sale.

Second—Whether the Wisconsin law, which required the

**After all
it isn't the price on
a bill of fare—**

that makes a dish taste good or bad and so far as the benefit from what you eat is concerned, it is often true that you'd have felt better after the meal if you had eaten the less expensive dish; something wholesome and satisfying rather than the rich combination with a fancy name and fancy price.

The other names for Foulds' Macaroni and Spaghetti are wholesome, satisfying and inexpensive and these splendid foods which make economy inviting and enjoyable have helped make it possible to live well at low cost.



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It can be "whipped"—that fact alone indicates its quality and purity. That also is

one reason why so many people use Carnation Milk in coffee, tea and cocoa—they like the rich flavor it adds.

It gives a rich flavor to vegetables; it adds to the delicious quality of bread, pies, cake and other things cooked with it. It is healthful and safe always for the children to drink.

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goods to contain the exclusive labels provided by that statute, and, in effect, prohibited the labels required under the National Food and Drugs Act, was beyond the power of the State to enforce.

"It is clear that the pure food statutes of the State of Pennsylvania, which do not interfere with the labeling provided by the National Food and Drugs Act, or with the inspection of the Federal authority under that act, do not even incidentally interfere with interstate commerce.

"There is another consideration. The enforcement of the pure food laws of the State practically begins where the Federal control ends. The Federal statute follows the goods from another State into Pennsylvania and on to the shelves of the retail merchant. When the goods get upon the shelves of the retail merchant the State inspection begins. There is no conflict of authority. The enforcement of Pennsylvania laws against goods on shelves of a retail merchant is not even an incidental control of interstate commerce, nor is it any interference with Federal inspection.

"I am aware that this opinion does not appear to be in harmony with the case of *Corn Products Refining Company vs. Weigle*, and the decree entered in that case which is before me, but not reported, certainly is not in harmony with this opinion, but there is no case in the United States Supreme Court which has gone to the length of the case just quoted, and, as I understand the decisions of that court, the case of *Corn Products Refining Company vs. Weigle* has gone farther than any other case in that it completely ousts State inspection of goods that were once in interstate commerce, if such goods happen to be labeled in conformity with the National Food and Drugs Act, and prevents the operation of any State statute upon such goods, even as between a retail resident dealer and the resident consumer of the State. I cannot agree that the passage of the National Food and Drugs Act has such sweeping effect in destroying the police power of the State.

"Therefore, specifically answering your inquiry, I am of opinion that after purchase and analysis of a bottle of catsup from the shelves of a store of a retail merchant in Pennsylvania, such catsup is found to violate the pure food laws of this State, such laws may be enforced, even though the catsup has been shipped from another State and is sealed and labeled in conformity with the National Food and Drugs Act of June 30, 1906."

FOUST AFTER GUARANTEE.

Food Commissioner James Foust of Pennsylvania is out with a suggestion that the National Canners' Association undertake to hold its members to very rigid requirements of sanitation and purity of product and then undertake to be the sponsor for the quality of all goods bearing the legend "Member of the National Canners' Association." The latest bulletin of Commissioner Foust's department contains the correspondence on the subject between the Commissioner and Secretary Frank E. Gorrell of the Canners' Association. In his letter to the association Mr. Foust says:

"Our observation of the canning business has led to the conclusion that no other organization in the country has done more to better food conditions and to aid food authorities in conserving the welfare of the consumer and in seeing that food products are prepared in accordance with the requirements of state and national law. Its officers and members have set a high standard and all seem to be working toward the same end—the preparation of their products in such a manner as to convince the public that they mean to produce for the general market the best possible brand of canned products.

"May I ask if it would be feasible for all canned products put up by members of the National Canners' Association to be labeled in connection with the canner's name and address, name of the product, etc., by inserting 'Member of the National Canners' Association.' What I have in mind is, if products put up by canners who belong to your association are bound under the declaration of principles and rules of your organization to can only pure, sound and wholesome products in sanitary factories, then the members of your association ought to have encouragement and assistance, and

this can only be done by advising the consuming public with the label that they are members of the National Canners' Association."

Mr. Gorrell in reply says: "Your suggestion in reference to the use of the name of the National Canners' Association on the label is one that has been given considerable thought, and the time will come when its use will be permitted. However, it is felt that there should be a rigid inspection to see that all products bearing this label are fully up to the requirements of the association. This is so largely true at present that some feel that the inspection is unnecessary, but it would not seem fair to let any small exception destroy the reputation of the association of the many responsible canners that it represents."

NEW KANSAS STANDARDS.

At a regular quarterly meeting of the State Board of Health, held in the offices of the Secretary in Topeka, Kansas, the food standards were revised as follows:

II. FOOD PRODUCTS.

B. GRAIN AND MEAL PRODUCTS.

1. Noodles, egg noodles, are dried alimentary pastes made from wheat flour and egg. They contain not less than five per cent (5%) by weight of the solids of whole, sound egg exclusive of the shell, without added color.

2. Plain noodles, water noodles, are dried alimentary pastes made from wheat flour without egg, or with less than five per cent (5%) by weight of the solids of whole, sound egg exclusive of the shell, without added color.

E. TEA, COFFEE AND CACAO PRODUCTS.

C. CACAO AND CACAO PRODUCTS.

1. Cacao beans, cocoa beans, are the seeds of the cacao tree, *Theobroma cacao* L.

2. Cacao nibs, cocoa nibs, cracked cocoa, is the roasted, broken cacao bean freed from its shell or husk.

3. Chocolate, plain chocolate, bitter chocolate, chocolate liquor, chocolate paste, bitter chocolate coatings, is the solid or plastic mass obtained by grinding cacao nibs without the removal of fat or other constituents except the germ.

Chocolate, plain chocolate, bitter chocolate, chocolate liquor, chocolate paste, bitter chocolate coatings, contain not more than three per cent (3%) of ash insoluble in water, three and fifty hundredths per cent (3.50%) of crude fiber, nine per cent (9%) of cacao starch, and not less than forty-five per cent (45%) of cacao fat.

4. Sweet chocolate, sweet chocolate coatings, is chocolate mixed with sugar (sucrose), with or without the addition of cocoa butter, spices, or other flavoring materials.

Sweet chocolate, sweet chocolate coatings, contains in the sugar in fat-free residue no higher percentage of ash fiber or starch than is found in the sugar and fat-free residue of chocolate.

5. Cocoa, powdered cocoa, is cacao-nibs, with or without the germ, deprived of a portion of its fat and finely pulverized.

Cocoa, powdered cocoa, contains percentages of ash, crude fiber and starch corresponding to those in chocolate after correction for fat removed.

6. Sweet cocoa, sweetened cocoa, is cocoa mixed with not more than sixty per cent (60%) of sugar (sucrose).

Sweet cocoa, sweetened cocoa, contains in the sugar-and-fat-free residue no higher percentage of ash, crude fiber or starch than is found in the sugar-and-fat-free residue of chocolate.

7. Milk chocolate, milk cocoa, sweet milk chocolate or sweet milk cocoa, respectively, is chocolate, cocoa, sweet chocolate or sweet cocoa which contains not less than twelve per cent (12%) of whole milk solids in the finished product.

The original standards applying to cacao and cacao products are herewith repealed.

This is to certify that the above standards were unanimously adopted upon the date and at the place above mentioned.

S. J. CRUMBINE, M. D.,

Secretary.

[SEAL.]

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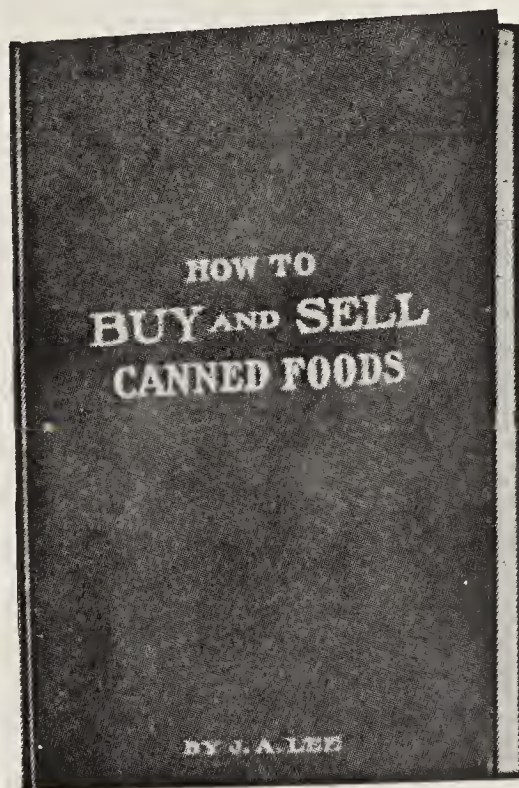
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MICHIGAN PEACHES STANDARDIZED.

State Food Commissioner James W. Helme has sent out a bulletin on Michigan peaches—the horticultural kind. Michigan grows fine peaches and the quality is said to be extra good this year. The bulk will be marketed between September 10th and 30th.

Organization of the growers and standardization of the pack has been successfully accomplished. All leading varieties can be furnished in three grades. Grade AA consists entirely of peaches $2\frac{1}{4}$ inches and over in diameter, Grade A is $1\frac{7}{8}$ to $2\frac{1}{4}$ inches in diameter, and Grade B is $1\frac{1}{2}$ to $1\frac{7}{8}$ inches in diameter. The packing is done by mechanical graders and every peach in a basket is exactly the size prescribed by the grade. No inferior or small fruit will be shipped.

Carloads of 400 bushels can be supplied by growers whose names will be furnished on application to Commissioner Helme at Lansing.

SANITARY MEASURES FOR STATE FAIR.

Pure food and proper sanitary conditions will be assured patrons of the Illinois State Fair which opens at Springfield, September 15. Stricter measures than ever before are to be enforced to safeguard the public health. If any substitute for the genuine is offered for sale, it must be plainly labeled as such.

Announcement to this effect was made by officials of the State Fair Association following a communication sent them by Commissioner W. Scott Matthews of the Illinois Dairy and Food Department.

The unusual hot weather experienced this year, as well as the large number of persons who annually attend the event, are pointed out by Commissioner Matthews as factors calling for a strict compliance with the laws by all restaurant operators and vendors of food and beverages.

MATURITY OF GRAPEFRUIT.

In response to repeated requests from many growers and shippers of grapefruit and Florida oranges, the bureau of chemistry in its service and regulatory announcements defines the terms "immature" and "maturity" as applied to these products. This definition is made because it is believed that it will give shippers a more exact means of determining for themselves whether their fruit has reached a proper stage for marketing—a matter about which at present there is much uncertainty. The definition is as follows: With the information now available the bureau of chemistry considers all grapefruit to be immature if the juice does not contain soluble solids equal to, or in excess of, 7 parts to each part of acid contained in the juice, the acidity of the juice to be calculated as citric acid without water of crystallization. The bureau also considers Florida oranges to be immature if the juice does not contain soluble solids equal to, or in excess of, 8 parts to every part of acid contained in the juice, the acidity to be calculated as citric acid without water of crystallization. Owing to the fact that the investigations of the bureau have not been completed, the ratios set for all grapefruit and for Florida oranges are lower than those which are believed to be the lowest for properly matured fruit. It may therefore be expected that the requirements will be made more strict after data from several crops are available.

FRAUD A BAR TO CITIZENSHIP.

Citizenship was denied recently in Chicago to two men who had been convicted of violating the pure food laws. Judge Rogers, in quarter sessions court, held that by their offenses the applicants had proved themselves to be undesirable. They had not only acted contrary to good morals, he pointed out, but had endangered public health as well. The applicants rejected are Morris Bressler, Marshall street, below Columbia avenue, and Joseph Gratz, Poplar street, above Tenth. Bressler was convicted in January, 1915, of selling rotten eggs for food purposes. He was fined \$200 and costs. In the last six years Gratz was twice convicted of selling unwholesome meat to poor people in his neighborhood. "The law of the United States," said Judge Rogers, "requires that persons be of good moral character before they receive the high tribute of citizenship. In both of these cases the applicants are not deserving of citizenship, as they have, during

the last five years, not only behaved in a manner contrary to good morals, but also endangered the health of the community by selling products unfit for food." At a former session of naturalization court Bressler and Gratz were called for final examination on their qualifications, but their cases were continued, pending an investigation into their records. When Judge Rogers denounced them as unfit for citizenship Bressler accepted the court's decision without demur, but Gratz tried to make an "explanation." Judge Rogers' sharp questioning forced admissions from Gratz that he had been found guilty by a jury and that fines had been imposed upon him.

SHRINKAGE OF PRINT BUTTER.

The Cornell Experiment Station has been making investigations on the shrinkage of print butter and has issued the following summary as a result of the work: 1. The variation of pore space, which ranges from .5 to 1 per cent to over 6 per cent in freshly made butter, is important in the printing process. 2. Print butter gradually loses weight in storage. 3. The rate of loss depends principally on the temperature and humidity of the storage room. 4. If the temperature is kept down to 50 deg. F. and the humidity is kept above 90 per cent at least a month, and perhaps much longer will be required for the shrinkage to approximate the limit set by the New York law, provided the prints are packed in boxes. 5. If the temperature is 60 deg. F. or above, and the humidity is 85 per cent or below, the shrinkage will approximate the limit set by law in a space of ten days to two weeks, even if the prints are packed in boxes. 6. The degree of shrinkage is not inversely proportional to the weight of the wrapper used, as is generally supposed. 7. The degree of shrinkage decreases to a considerable extent when the prints are placed in cartons. The other two methods of packing, however—leaving the prints dry after placing them in boxes, or sprinkling them with water—produce about the same effect on the degree of shrinkage. 8. In the average small store refrigerator, the loss will approximate the limit set by law in a space of ten days when the prints are piled loosely on the shelves.

VEGETABLE GROWERS' ASSOCIATION CONVENTION.

The annual convention of the Vegetable Growers' Association of America will be held at the La Salle Hotel, Chicago, September 26, 27, 28, 29, 1916. The program includes an extensive trade exhibit, round table discussions, and addresses by leading gardeners, truck farmers, greenhouse men, and representatives from various colleges, experiment stations, and the U. S. Department of Agriculture. Marketing, soil fertility, heating, packing, spraying, and other subjects will be covered on the program, which is being prepared and will be announced soon.

An invitation to attend the convention is extended to everyone interested in the work of the Association. Advance indications predict a large and enthusiastic convention.

Additional information regarding the convention and a copy of the complete program may be secured by writing James B. Foley, Secretary, Chicago Convention Committee, 3100 South Spaulding avenue, Chicago.

MONTANA BANKERS SEEK REPEAL OF BANKRUPTCY ACT.

At a recent meeting of the Montana Bankers' Association held at Miles City, Mont., resolutions were adopted advocating the repeal of the Bankruptcy Law and endorsing the work of the Anti-Bankruptcy Law Association of Chicago, Ill., of which Oscar B. McGlasson, past president of the National Wholesale Grocers' Association, is the head. Resolutions passed are as follows:

This action, stated Mr. McGlasson, is characteristic of the stand taken by a number of representative trade, civic, and industrial organizations throughout the country.

Mr. McGlasson further stated that proceedings of the recent hearing before the Committee of the Judiciary of the House of Representatives are now off the press, having been printed by the Government as part of the Congressional records, serial No. 33. These are furnished gratis by the government and copies may be had by writing your Congressman for them.



The Alert Are Natural Oat Lovers They Crave Animating Foods

One who expends vitality craves something to replace it. So active people—and active races—are the great oat consumers.

And youth is the oat-food time.

But youth lasts longer than it used to. And the use of oat-food is vastly increasing—at least the use of Quaker Oats.

The oat is the energy-creator.

It is the great phosphorus-supplier.

It is the perfect food, supplying all we need save fat. And cream adds that.

In right form—as in Quaker Oats—it is Nature's most delightful cereal.

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The Cream of This Vim-Food

Quaker Oats attained its fame by making oats doubly-delicious.

All the oats used to go in an oat food—the puny and plump together.

We make a rigid selection. Two-thirds of the oats as they come to us are considered unfit for Quaker.

This brand is made of the rich, plump grains. Thus it stands unique in flavor and aroma.

Quaker Oats is oat food made exquisite. In Europe and Asia it is the food of the palaces. In America all folks can afford it, for it costs no extra price.

Ask and you'll get it.

10c and 25c per package
Except in Far West and South

A \$2.50 Aluminum Cooker

Made to our order, extra large and heavy, to cook Quaker Oats in the ideal way. Send us our trademarks—the picture of the Quaker—cut from the fronts of five Quaker Oats packages, or an affidavit showing the purchase of five packages of Quaker Oats. Send \$1.00 with the trademarks or affidavit, and this ideal cooker will be sent to you by parcel post prepaid. We require the trademarks or affidavit as assurance that you are a user of Quaker Oats. The trademarks have no redemption value. This offer applies to United States and Canada. We supply only one cooker to a family. Address
The Quaker Oats Co., 1708 Railway Exchange, Chicago.
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Used as shortening, it blends with the flour easily and the result shows in the fine baking. Used for frying, it makes the food better tasting and more digestible. Try it—realize the *quality* it gives to foods.

Your grocer will supply you regularly—Cottolene is packed in pails of various sizes.



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BRAND

Evaporated Milk

The Standard of the World
WINS AND HOLDS TRADE
on account of its Superior Quality.

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HELVETIA MILK CONDENSING CO.

Highland, Illinois

ORIGINATORS OF EVAPORATED MILK



Gleanings from the World of Foods



DIRECT dealing with Hamburg, Germany, had increased rapidly in recent years, but this outlet into the German Empire was closed so effectually that not a single package of American apples has been forwarded direct to that port. On the other hand, the Scandinavian markets, which formerly received their supplies through English and German channels, have taken large quantities direct. This should prove to be of real benefit in future years, for the reason that when direct dealing is once established it is likely to continue.

The following statement of total export shipments from the United States and Canada during the past five years is given for purposes of comparison:

TABLE 5.—TOTAL EXPORT SHIPMENT OF APPLES FROM UNITED STATES AND CANADA.

Fiscal year.	From the United States for fiscal years ending June 30.	From Canada for fiscal years ending Mar. 31.	Total.
	Barrels.	Barrels.	Barrels.
1910-11	1,721,106	523,658	2,244,764
1911-12	1,456,381	1,664,165	3,120,546
1912-13	2,150,132	1,324,769	3,474,901
1913-14	1,506,569	947,382	2,453,951
1914-15	1,846,224	1,117,336	2,963,560

American shippers have made a special effort to develop markets for apples south of the equator. Direct trade with South America may be said to have begun five years ago. Prior to that time supplies had been secured principally from England and Australia, apples from the United States frequently going to these markets through the hands of English dealers. Direct sales to South American markets were small in the first year, and they were made subject to acceptance upon arrival, the shipper paying all freight and insurance charges and collecting through the medium of English banks by sight draft attached to the documents.

The shipments from New York direct to South America increased approximately 400 per cent in the first four years after direct trade began. No consignments were attempted without previous sale until the fall of 1913, when an exporter shipped 13,000 boxes to Buenos Aires via New York and, a little later, 9,000 boxes via the Straits of Magellan.

An early opportunity was secured to dispose of the 22,000 boxes at a profit of about 40 cents a box, but a large proportion of the consignment was held too long, resulting in a loss to the shipper on the transaction as a whole. The same shipper, however, is now preparing for further shipments to South America early in the coming season, for the handling of which arrangements have already been made.

During the past year a New York firm of distributors sent a representative to study the South American markets and make trade connections for direct handling. This firm formerly had sold apples and other products to New York exporters.

The representative spent two months in South America, but met with considerable difficulty in interesting the importers, who, it appeared, were very well pleased with their trade connections in the United States. Contracts for the sale of approximately 9,000 boxes for fall delivery were secured eventually, and agents appointed in Buenos Aires. Sales were arranged upon easy terms, but when deliveries were made only 1,600 boxes were accepted, the balance of the shipment being sold by the commission agent. Thereafter regular consignments to this market were made for the purpose of supplying the demand independently of the importers who formerly had controlled the handling of this commodity. Much of the fruit has been sold at auction, circulars being previously distributed among small dealers, hotels, restaurants, etc. On March 3, 1915, 5,000 boxes of apples were sold in this manner.

It is not known just what the future results of these experiments may be. It is thought by those who have had the longest experience with South American importers that these markets can be developed best by handling the business in a manner most acceptable to the dealers. Attention is called to the fact that the importers have been accustomed to supply their markets by placing orders judiciously and receiving only such stock as has been bought previously. The consignment of apples, therefore, is severely discouraged by them, and it would appear from the experience of the past two years that those shippers who have endeavored to secure this trade by overstepping Latin customs have not been entirely successful in their ventures.

It is understood that formerly the margins of gross profits have been very large. Owing to the risks involved, it is only to be expected that this business could not be handled upon margins that might prevail in the United States or between the United States and Europe. Apparently, American trade with markets below the equator has been conducted with profit both to the American shipper and to the South American importer. The consignment methods would seem to decrease the profits per package, and it is possible that this accounts for some of the opposition reported to have been encountered. It is too early to arrive at definite conclusions regarding the effect of these consignments upon future business.

At Buenos Aires, the chief market for this commodity, the cold storage facilities are considered to be excellent and space for short-time storage costs from 1 to 1½ cents per box per day. Consignments to Brazil have not been attempted. A duty of \$1 per box is imposed by the Brazilian government, and this adds to the risk of shipping fruits unsold. The chief market is Rio Janeiro, but the trade of that city is considered to be somewhat controlled by one concern, which operates the only cold storage plant. It has been reported that a Brazilian railway company with terminals at Rio Janeiro plans the erection of a competing storage. If this plan is executed it is thought the conditions in this market would be considerably improved for receiving and handling consignments of American apples.

The ocean freight and insurance amounts to \$1.20 per box. The facilities for safe transportation have been greatly improved within the past two years, owing to an increase in the importation of fresh meat from Argentina. Refrigeration is necessary for meat transportation, and the cold chambers are well suited to the transportation of apples on the return journey. If trade in meat products between South America and the United States continues to increase, the facilities for handling large quantities of apples are expected so to improve that space will be sufficiently available to justify lower rates. When the cost of transportation and the usual trade margins are combined, it will be seen that the selling price of apples in South America of necessity must prohibit heavy consumption. If transportation facilities can be improved so as to decrease the rates and the risk of deterioration in transit, it is believed that trade margins may be decreased reasonably and that the result in price to the consumer will be such as to encourage a large increase in shipments.

In order to assure the safe transportation of apples to South America it is necessary that the fruit be carefully selected, graded, and packed by hand, special care being exercised to eliminate everything that can not be classed as "Fancy" or "Extra Fancy." The box package is preferred for the reason that the fruit arrives in much better condition than when packed in barrels. To illustrate the need of care in this respect, the experience of an eastern fruit growers' association may be given. Through its foreign agent the sale of several carloads was made to a South American importer at 12 shillings per barrel delivered on board the steamer at New York City. Delivery was made and the money collected, but the future patronage of the buyer and probably the prospect of future sales in his market apparently



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PRIDE OF THE FARM
Tomato Catsup

Bridgeton, N. J.
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AN IMPORTANT ANNOUNCEMENT

TO THE JOBBER AND RETAILER



The St. James Importing Company, of New York and London, the well-known distributors of Waw Waw Sauce, has been bought by men of strong financial backing who bring to the Company not only ample resources but also the full benefits of many years' experience with one of the largest and most successful manufacturers of food products in the country.

Plans are already laid to place Waw Waw in its deserved position as the King of Table Sauces.

We cannot make Waw Waw Sauce itself any better but we can and will make Waw Waw Sauce a better seller.

An extensive advertising campaign in the leading Journals is now in course of preparation. No pains, expense or effort will be spared to make Waw Waw a leader in easy, steady selling, just as it is now a leader in quality.

Full details of the new plans will be mailed to jobbers and retailers throughout the country. In the meantime the already increasing inflows of orders are being filled promptly from our New York warehouse.

SPECIAL—If you are not fully acquainted with the unusual merit of Waw Waw Sauce, write at once and a full size sample bottle will be sent for trial on your own table.

St. James Importing Company NEW YORK

have been lost, because the fruit was not properly graded and packed at the time it was shipped from the producing area. An investigation has shown that this fruit had been packed without inspection on the part of the organization and that the packing was done some days in advance of shipment. Only a few barrels in each lot were inspected when the fruit was loaded on the cars.

Table 6 shows the direct shipments of apples in terms of barrels from New York to the respective South American markets within the past five calendar years. The values given were those entered upon the steamship manifests and were estimated either upon the basis of the New York market or upon the value at destination.

TABLE 6.—EXPORTS OF APPLES FROM NEW YORK TO SOUTH AMERICA, BY COUNTRIES, DURING THE YEARS 1910, 1911, 1912, 1913, AND 1914.

Country.	1910		1911		1912	
	Barrels.	Price.	Barrels.	Price.	Barrels.	Price.
Argentina	1,182	\$ 4,340	8,464	\$ 36,882	6,939	\$ 37,511
Brazil	9,186	34,525	16,150	67,370	14,977	63,688
Chile .....	.....	.....	5	20	.....	.....
Colombia	450	2,077	638	2,564	896	2,985
British Guiana	126	561	581	2,081	551	2,118
Dutch Guiana	260	1,138	273	1,137	203	750
French Guiana	3	12	7	26	9	33
Uruguay	305	1,270	583	2,795	280	902
Venezuela	1,144	4,121	1,570	6,557	2,213	7,977
Total	12,656	\$48,044	28,271	\$119,432	26,068	\$115,964
Country	1913		1914			
	Barrels.	Price.	Barrels.	Price.		
Argentina	36,513	\$158,378	28,045	\$194,358		
Brazil	21,936	111,780	13,264	96,523		
Chile .....	.....	.....	.....	.....
Colombia	929	3,379	778	2,475		
British Guiana	448	1,934	127	396		
Dutch Guiana	187	763	104	327		
French Guiana .....	.....	.....	.....	.....
Uruguay	603	2,352	2,240	9,931		
Venezuela	1,579	5,746	1,686	5,175		
Total	62,195	\$284,332	46,244	\$309,185		

The information secured from the apple market investigations conducted by the office in 1914-15 would seem to warrant the following conclusions:

(1) That relatively low prices in large crop years in the beginning of the season make for quick movement and rapid consumption, with the natural result of better season averages.

(2) That the marketing of inferior grades along with good fruit in large crop years is not profitable.

(3) That the effective operation of grade and package laws may be counted upon to aid in stabilizing apple markets.

(4) That the general dissemination of accurate information regarding the holdings of apples in cold storage at stated periods tends to eliminate speculation by bringing about a more even distribution upon the basis of actual sales.

(5) That the Panama Canal route may be an increasingly important factor in the distribution of apples grown along the Pacific seaboard.

(6) That the exports of apples during the season 1914-15 were large, despite the unsettled conditions caused by the war in Europe, and that a demand for American apples may be expected to continue.

(7) That apples from the United States are growing in favor with South America, and that by judicious co-operation with the Latin-American trade shipments may increase.

The studies conducted in the markets during the fall of 1914 indicated the need for more strict grading and careful handling, the elimination of culls from the fresh fruit markets, more intelligent distribution, and the effective operation of co-operative associations. Often when the individual growers act independently in marketing the crops, there is little uniformity in the grading and packing, much poor fruit is shipped, much good fruit is forwarded in overripe condition, and the output of the community is dumped on the markets with little regard for equitable distribution or proper storage conservation.

Better methods are required for profitably marketing the increasingly large apple crop. These methods are provided best by effective co-operative organizations. In those states in which apples are packed in boxes, the growers' associations handle a very large percentage of the output. The quality of their fruit, the uniformity of the pack, and the distribution of the crop far surpass the individual results of the middle west and east. Unusual difficulties were responsible

for the development of co-operative associations in the far west, and it is thought that the problems of the growers east of the Rocky Mountains are coming to be so great that dire need will require them to organize for the purpose of securing more profitable results.

HALF BILLION FOR CANNED FOOD.

According to an address by Secretary Frank E. Gorrell of the National Canners' Association, delivered recently before the Indiana Canners Association, the factory value of canned foods produced in this country (based on the government census figures of 1914) aggregates not far from \$380,000,000, and, with distributive costs added, involves the expenditure by consumers of not far from half a billion dollars.

"The general public does not realize the magnitude of the canning industry," said Mr. Gorrell, "and I question if there are many canners themselves who actually know the immense amount of canned foods annually consumed in the United States. The number of canning establishments, according to the census report, was 2,862 in 1909 and 3,199 in 1914, an increase of 11.8 per cent.

"This increase is negligible when compared with the output, which in 1909, on fruits and vegetables, is valued at \$96,943,273, and in 1914 at \$158,015,892, an increase of over 63 per cent. Of these figures, vegetables canned in 1909 amounted to \$53,307,791, as compared with \$84,413,667 in 1914, or an increase of 58.4 per cent. The fruits canned during the same period show an increase of 96.5 per cent, the figures being \$12,672,900 in 1909, as against \$24,897,174 in 1914.

"I was not privileged to get the figures on other canned products, but believe that those given below are substantially correct:

Fruits, vegetables and canned soups.....	\$150,015,893
Salmon	30,000,000
Milk	60,000,000
Meats	15,000,000
Sardines	6,000,000
Shrimp, oysters and other sea food.....	3,000,000
Hawaiian pineapple	5,000,000

Total\$277,015,893

"It seems almost beyond comprehension that the canning industry has grown to its present size, and especially the marked increase in the output in the last five years. I heard it recently estimated that the canning industry as a whole has grown over 100 per cent since 1907, and the Government figures would make it seem that confidence can be placed in this estimate.

"The claim has been made, and there is force in it, that the canning industry is looking too much toward the manufacturing end and not enough to distribution, and I am presenting these figures to bring home in the most forcible way this phase of the question.

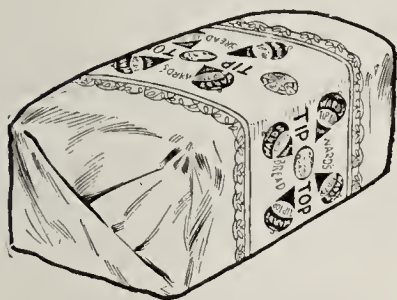
"In this connection it is fair to say that the National Canners' Association, which came into being in 1907, can claim some credit in helping in a general way to increase the confidence of the consuming public in canned foods. Its work has been without the blare of trumpet, but has consistently continued ever since its organization.

"Among its early efforts was the investigation of alleged ptomaine poisoning cases which were appearing in the daily papers, together with a great deal of harmful literature showing a general prejudice. Each of these publications was investigated in an exhaustive manner through a personal representative. During the past seven years nearly a thousand cases have been taken up, and the results in practically every case fully exonerated the canned food blamed as being the cause of illness or death. While not a single case of illness has been found which could substantiate the evidence of an illness or death from the consumption of sterile canned food in marketable condition, the association has uncovered a number of crimes and suicides where canned foods were used as an easy medium for producing death because of the general popular prejudice. A murderess is now serving a life term in one of the Western penitentiaries because of an investigation which resulted in a confession that paris green had been

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is made in model bakeries which are marvels of food manufacturing cleanliness. Only highest grade and absolutely pure materials are used in making it and the process under which it is made is the most scientific and advanced known to the bread making industry.

Every loaf of WARD'S TIP-TOP BREAD is wrapped by machine in waxed paper. It is clean inside and outside and a wholesome and nutritious food.



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Perfect Cider - 100% Profit

15 gallon kegs sell to retailers at	\$12 00
Cost to you at Memphis	- 6 00
Your gross profit (100 per cent)	- \$6 00

30 gallon keg sells to retailer at	\$24 00
Cost to you at Memphis	11 0
Your gross profit (110 per cent)	- \$12 60

50 gallon barrel sells to retailer at	\$37 50
Cost to you at Memphis	- 17 50
Your gross profit (114 per cent)	- \$20 00

Cooperage: 15, 30 gal. kegs, 50 gal. barrels

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Soda Water
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Cider is guaranteed exempt from
Internal Revenue Tax, and to con-
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WE ARE BOUND TO GET YOU YET.

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themselves to careful, neat packing;**

and they have actually saved
money for shippers and car-
riers in lessening damage and
loss.

Sefton Boxes have played an
important part in improving
shipping conditions. Sefton
Board has more corrugations
to the inch, and higher corru-
gation than any other kind.

Our boxes are made with just
one idea—to carry goods safely,
cheaply, cleanly, efficiently;
and they do it.

The Sefton Mfg. Co.

1333 W. 35th St., Chicago



added to canned food to kill her husband for some coveted life insurance.

"The National Cannery Association has, since its organization, stood for improvement in canning methods and the output of the canners. It has vigorously and earnestly favored the enforcement of the national and State food laws. It has recognized the right of the consuming public to demand and receive an honest can of foods. This attitude of earnestness reflects not only the views of the individual officers of the association, but of its entire membership as well. The average canner really wants to do better each year.

"The most important step that the National Cannery Association has ever taken was the establishment of its research laboratories in Washington. I make the emphatic statement that the mere establishment of these research laboratories created a favorable impression, not only in the minds of the scientific world and national and State food officials, but the thinking people of the country as well, which, if it could be computed in dollars, is worth many times more than the entire cost of the laboratories. The thinking people of this country believe that the canning industry is in earnest, as is evidenced not by mere words, but by positive, progressive, constructive acts.

"These laboratories have been doing a great amount of research, and this work is just beginning to show. It should be remembered that these laboratories have not yet been in existence three years, and it is surprising to be able to record the number of their present accomplishments.

"At present one of the most important pieces of work is the experiment that is being made on tin plate. While a great deal has been done in the past on the contents of the can, little attention has been given to the container, which, after all, is just as important as the contents. Early in 1915 arrangements were made with a number of prominent chemists collaborating, to make an experimental pack which would test out the proper base plate and the proper tin coating for all the different products. For this purpose certain products have been packed in 49 different kinds of tin plate, and the effects of these foods on the containers are being studied and tested out. When this tin plate investigation is finished the canning industry will know for a certainty and it will be established for all time the proper tin coating for packers' cans.

"There still exists in the minds of many people the idea that in some way it is possible for the tin plate to create the germs of ptomaine poison. I am amazed that this feeling exists in the minds of educated people who ought to know better, but I am still more surprised that even in the minds of some of the canners is the idea that a ptomaine germ can be formed by the action of food on the tin plate. Let me once and for all correct this erroneous impression. The ptomaine germ, about which so little is known, is in no way, shape or form connected with the tin can. Scientific literature tells us that it is a germ of decomposition which probably can only exist in certain kinds of foods. For instance, it is believed by scientific men that ptomaines cannot be formed in fruits or in most vegetables, canned or fresh. We do not know that they can be formed in any vegetables.

"We do not know of a single instance where this germ has ever been isolated from commercially canned food. It finds its most fertile field in good products which are largely composed of albuminoids, and it is the growth of decomposition. Decomposition will take place in all foods according to their nature, when exposed to the air. Even the uninitiated, if they will stop to think, will realize that germs cannot enter a can which has been hermetically sealed, and that sterilization destroys the germs of decomposition which are in the can. Therefore, decomposition cannot take place in the can as long as the container remains intact. If for any reason sterilization is not complete, decomposition necessary to produce ptomaines would be even more obvious to taste and smell than in food that has not been canned."

Short weights and measures and incorrect scales where foods are bought or sold drain the pocketbook and are an impolite way of stealing.

NEW ORLEANS WANTS MORE COFFEE SHIPMENTS.

The coffee committee of the Board of Trade of New Orleans has taken active steps towards establishing freight shipments by steamer from New Orleans to Brazil. The following special committee has been appointed by Charles M. Dittman, chairman of the main committee, to handle this matter:

Stonewall Jackson, Louis Bright, Charles R. Dittman, Jr., and Theo. Brent of the New Orleans Joint Traffic Bureau. They will go to New York to confer with heads of shipping interests September 11.

While New Orleans receives direct shipments of coffee from Brazil, there are no direct return steamers from this port to Brazil. Shippers in this territory are compelled to send their goods to New York, from which point they are loaded on steamers for South America.

Efforts of the committee will be to have the steamship owners route their boats via New Orleans on the southern trip, and take on cargo for Brazil here, or, better still, to obtain steamers to ply between New Orleans and Brazil.

PERUVIAN TREASURE RICHER THAN GOLD.

The gold of the Indies was the attraction that led Columbus to sail westward, that carried Cortez to Mexico and Pizarro to Peru. The Incas had large stores of the precious metal, representing, no doubt, the accumulations of many centuries. The capture of such a booty resounded through Europe. Spain became for a time the wealthiest as well as the most powerful nation of Europe, and this was ascribed to the gold of Peru.

But Peru held another treasure much more valuable for the nations of Europe than the golden booty of Pizarro. Carrying the potato to Europe was an event of much more profound significance in relation to the subsequent history of the world than sending the Inca gold to the coffers of Spain. But nobody understood the value of the potato, and its Peruvian origin was generally forgotten before the plant became well known. Instead of Peruvian potatoes we call them Irish potatoes.

The potato was the basis of the ancient Peruvian nation and has attained almost the same importance in other parts of the world within the last hundred years.

SIAM'S IMPORTS OF AMERICAN FOODS.

The share of the United States in Siam's imports of food-stuffs for the fiscal year ended March 31, 1915, was valued at \$18,973, a decrease of \$9,038 as compared with that for the preceding twelve months. This falling off, however, was more than accounted for by the decline in flour imports, of which \$10,688 worth was credited by the Siamese customs to the United States in 1915 against \$20,833 for 1914; but in this connection attention should be called to the flour imports credited to Hongkong during the same period (\$139,115 and \$136,461 worth, respectively), as it is a well-known fact that the original source of most, if not all, of this flour is the United States.

In general it appears that no special efforts have been made by United States producers to supply Siam with food products, as out of the total amount of \$4,379,493 worth imported during 1915 only \$18,973 worth, as stated, was entered at the Siamese customs as coming direct from the United States.

During the year under consideration the following food products of interest to United States producers were supplied to Siam from abroad: Biscuits, \$91,548 worth, of which \$3 worth came from United States; butter, \$23,407, from United States \$57; cereals, \$20,673, from United States \$145; cheese, \$4,980, from United States nil; canned salmon, \$54,715, from United States \$2,263; flour, \$175,376, from United States \$10,688; fruit, except canned, \$204,577, from United States \$14; preserved meat, \$51,047, from United States \$432; canned milk, \$108,501, from United States \$931; sugar and molasses, \$1,077,044, from United States \$49; dried vegetables \$405,104, from United States nil. There is also a fair demand for California canned and dried fruits, jellies, and jams, but statistics as to the amount of the yearly imports are not available.

There are no pure-food laws or other measures regulating or restricting the import or sale of foods in Siam.

It is reported that there is a big market in Hawaii for box shooks for packing canned pineapple and pineapple juice.

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In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

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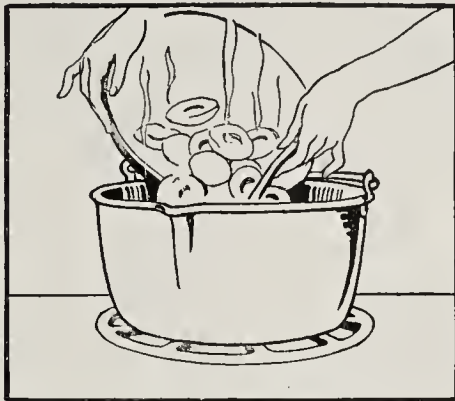
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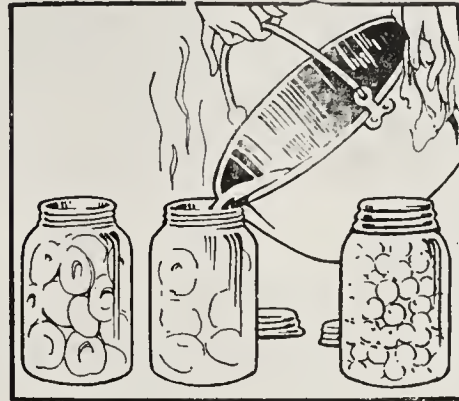
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Vol. XI.

OCTOBER, 1916.

Number 10.

Our Daily Bread

FOR six weeks bread has been given more space in the news columns of the daily papers than any one other topic, aside from the war and the November elections. Soon after the annual meeting of the Master Bakers' Association, held in Salt Lake City in August, the discussion began in the press of cities east and west, precipitated by the report that bread must soon be advanced in price, as the bakeries were no longer profitable.

The quantity of the matter on this subject appearing in the papers does not surprise the sophisticated reader. Reporters who cannot make "good stories" out of ordinary happenings are not recognized as capable. But there is much that is surprising in the flood of reports, comments and suggestions. Now and then there is a half-column, more or less, that well might serve the text-book makers as an excellent specimen of unconscious humor.

Nearly all food products are high in price at this moment, many of them influenced by reports of crop damage and threatened shortage of product. Wheat and flour began to advance in market quotations with the first show of disturbing conditions in the early estimates of crop reduction. As the advices continued, progressing from apprehension of danger to certainty of loss and a shortage of millions of bushels, the prices climbed. The needs of the country are known, the supply, if correctly estimated, represents a year's production that must serve until another crop is harvested. Whether the market has felt the fever of speculation rather than the stimulation of legitimate demand is a question not pertinent to this inquiry. Wheat is higher than it has been for years; flour has touched a mark above every record save those of the days of civil war and a depreciated currency.

With these facts in view there is nothing astonishing

in the announcement by the bakers that they must advance the price of bread or make smaller loaves. It would seem a matter of course. Eggs double in price in the winter months, because poultrymen have not yet learned how to induce their hens to lay in cold weather. Butter formerly fluctuated in price in the same way and at the same seasons, because pastures are dry in the fall and hay is not a perfect substitute for green clover. When the prices advanced the public grumbled, but accepted the higher rates as seasonable inflictions that must be endured. The public will do the same thing in this time of higher prices for bread. The struggle for increased business will bring prices down when conditions are suited to the change.

Of course there was much talk of governmental investigation, which was very well, so far as the government officials were concerned, but not very well so far as ill informed newspaper writers regarded it. The government, acting under the Sherman law, would quickly restrain any combination or conspiracy formed to control prices, but it could not say how much bread a baker should sell for a nickel. Municipal authorities have power to adopt, as many have adopted, a standard of weights for loaves of bread, but they cannot fix the price at which they must be sold. At least, not in times of peace and quiet. This should have been made plain to readers, yet rarely indeed did any newspaper put the matter clearly.

Now and then some bright young man asserted that housewives would go back to baking bread in their own ovens. This, immediately following the statement that the large loaf, suggested by the bakers as a standard size at 10 cents, was too big a supply for the ordinary family and would dry up, become stale and useless before it could be consumed. The picture of a

housewife making and baking a single loaf of bread, buying the materials and paying for the fuel to heat the oven, to economize in producing a 6-cent loaf for less money, was not convincing.

In Chicago and some other cities the former 5-cent loaf is now sold at 6 cents in many retail stores, most of the big bakeries having adopted the new schedule. Some bakers still sell at the old prices, but in many instances they have made the loaves smaller. It is safe to say that the advanced rate or the smaller loaf will be the rule throughout the country within three months.

Some investigators claim that the bakers have contracts with the millers, made before prices for flour advanced, and consequently do not need to raise their rates for bread. There are such bakers, but not enough of them to have any effect on the flour market. There are wheat growers who have garnered a good crop, in spite of the crop damage which has afflicted their neighbors, but they are not numerous enough to influence the general crop reports.

There is this consolation: Bread, the staff of life, at 6 cents a loaf is still the cheapest food in the market. Compared with most other eatables on the daily bill of fare, it gives more nourishment for a cent than can be had for 5 cents otherwise expended.

THE LINKS OF A GREAT CHAIN.

BUSINESS is not a game in which material figures are moved in accordance with unchanging rules, like pieces on a chessboard. In the one there is a definite order, a complete and finished result, and no continuing train of circumstances; in the other, with all its display and motion of tangible objects and play of ingenuity and skill, there is a product governed by a force greater than that of all the players combined.

The advancement of the individual in position, the development of his power and accumulation of his resources, are easily measured and summed up, but the end and result of his efforts are seldom recognized, for the future holds them. No man builds or sows for himself alone, or for his own family, or neighborhood, or state. His achievements, however simple and selfish or complex and humanitarian, are part of a universal plan.

There is foundation here for arguments not in line with the objects of this journal, but the thought is impressive even as it applies to the field in which this publication labors, and the institutions in whose operations it finds its chief interest. The growth and development of causes furnish curiously interesting studies; the thinking man cannot ignore them and the writer neglects his duty if he fails to note these evidences of progress and examine their relations and significance.

When the legislative control of food products was in its infancy there was loud outcry against the methods adopted, and bitter assaults on the idea behind them. Some of the most vigorous opponents of state and federal regulation were manufacturers who had no reason to fear either inspection or food rulings, but who could see no good in a paternalism which interfered with business.

Here, let it be confessed, the working out of the idea that the health and understanding of the public must not be trifled with was not accomplished then, and is not managed now, with perfection in method or results. No plan that rests on

human endeavor, however wise and benevolent, is free from human weakness, and it will remain imperfect. But the idea had vital qualities and it thrived. Its progress toward the goal of human welfare has been steady, if not as rapid as could be wished.

And, strange to say, its by-products, so to speak, are today the chief factors in American producing industries.

From the pneumatic tire, put on the bicycle in the late '80's, came the aeroplane of 1915, that has revolutionized military science. The tire was fitted to carriages, and when the gasoline engine had been improved they gave us the automobile. With the perfected explosion-power engine, the heavier-than-air flying machine was possible, but not before. That chain is only twenty-five years long.

From the beginning of the food control laws to the present time is a record of less than a quarter century, and its chain of events is even more imposing, now that the links of this year come into view.

Producers, manufacturers, and dealers saw, early in the history of the movement, that compliance with the laws and their standards in an orderly and systematic way, or effective opposition to unwise legislation in this line, could not be managed well without co-operation and organization. They were driven together. The history of the national associations of producers and distributors will show that these great bodies—and every industry is organized—were formed soon after the food control laws became widely operative.

There were other reasons, of course, that served to bring the prominent figures in trade lines into closer touch, but the first motive is here set down. Gathered in conventions of their kind, these men found new inducements for friendship and co-operation where before they had practiced unfriendliness and competition to the point of destruction. They were building better than they knew.

Two years ago the commerce of the world was disrupted and paralyzed by the war in Europe. New and unprecedented situations were faced, and America, the greatest producing country undisturbed by immediate connection with the conflict, was met by an opportunity such as never before had been created. It is not necessary to reflect on the resulting conditions, had there been no organizations of producers and distributors, no measure of co-operation in manufacturing circles of similar interests. There were such organizations, and there was such co-operation. The result is shown in the expansion of our trade abroad, which is measured in hundreds of millions.

The end is not yet. There are new fields of commerce and new problems of demand and supply that cannot be conquered and turned to profitable use under any conditions that do not include co-operation and organized effort. It is no idle boast to assert that American enterprise, informed with the new spirit of American progress, will be equal to the tasks set by this commercial crisis of expansion.

And the food control departments, national, state, and city, are still aids in the movement. It is a great chain, even if it is not a very long one in lapse of time.

WANTED, A COMMON DIVISOR.

THERE is an opportunity in the financial world for American inventive genius which should not be neglected. A new coin is greatly needed, in the interest of economy and trade facilities, and the inventor has only to discover or create a taking name for the required piece to shower blessings on the public and immortalize himself. Were an apt descriptive title suggested, one subtly calculated to fire the popular imagination, there would be hope that Congress might be moved to set the mints in operation.

What is needed, and needed more than any reform that could be suggested for our currency, is a coin of the value of $2\frac{1}{2}$ cents—half a nickel, quarter of a dime. Its metallic composition, size, and design are details of much less importance than the name which shall distinguish it. That is the essential part of the campaign for this required addition to our medium of exchange. It must have a title which is more than simply descriptive, that is short, easily spoken, and picturesque in its application.

The nickel comes by its name with only a color of honesty, for our popular five-cent piece is but 25 per cent nickel and 75 per cent copper. The old-time cent piece, nearly an inch across, was more justly termed a copper. In most recent days the nickel has been called a jitney, but though that term, as an adjective, is accepted generally in such designations as jitney-bus, there is a suggestion of low or dubious origin in the word which precludes any present likelihood of its general adoption as the name of the coin.

Our ten-cent piece derives its title of dime by relation to the decimal system which gave it birth, and in direct line from the French term which signifies a tithe. The name is short and well-sounding, but it is popular only in a qualified sense. Not half the time is it used in trade as a contraction for the words ten cents.

In the early days of the republic we had for small currency familiar terms which have gone entirely out of use and are unknown to the younger generation. The sixpence and ninepence were survivals from British occupation, but the New England and "York" shillings were local conventions, the New York shilling being $12\frac{1}{2}$ cents and the New England shilling 16-2-3 cents. We have shillings no longer, and even in Canada, which in most things is intensely loyal to mother country ways and means, the 25-cent piece has superseded the English shilling.

There was a threepenny-bit in the old times, but it has disappeared. The bit, as a name merely, lingers in the far West, but is rarely spoken of except in compound terms, two-bits, four-bits, six-bits—that is, 25 cents, 50 cents, and 75 cents. Fifty years ago the long bit, 15 cents, and the short bit, 10 cents, were in common use in Pacific Coast regions, but only in words, as there was no coin distinguished by the title of bit.

Should the government coin a $2\frac{1}{2}$ -cent piece, it would come into general use with little delay. It is needed in making change in all lines of trade. The public would find a saving in its use far beyond any estimate made on present conditions, for the circulation of the coin would induce new practices. For instance, with a slight rise in manufac-

turing cost, package goods are commonly advanced in price by retail dealers in 5-cent gradations; the 10-cent package is marked up to 15 cents, the 15-cent package goes to 20 cents. Of course it may be argued that this is not a good method, but the fact remains. For some reason the dealers, especially in food products, hesitate to use odd cent prices, unless in instances where cut rates or bargain sales are advertised. They would find continual advantage in the use of a $2\frac{1}{2}$ -cent coin.

It may be held that this idea cuts both ways, and that the public would lose in many transactions, as it might gain in others. In a superficial view this is true, but it is no less certain that the new plan would mean the encouragement and prosperity of many enterprises which now languish. They are operating on too close a margin, and are restricted from putting a higher price, and one entirely just, on their products, by the conventions of retail trade. The public is the loser when a meritorious article is not made known generally. Manufacturers and producers suffer when consumption is checked by high prices or adverse conditions.

Undoubtedly the public will soon find an expressive term for the coin when it comes, but the coming would be hastened, and all the people benefited, were some quick-witted American to bring forward the one word to fit the emergency.

Prof. Anton J. Carlson of the University of Chicago has written a book dealing with what he calls the hunger urge and its relation to man's gastro-nomic activities. The work tends to the establishing of doubt as to whether anybody knows when he is hungry. "Appetite is related to previous sensations of the taste and smell of food," says the professor. Granting the claims of the discoverer, the food trade will not be materially affected. Eating is a habit, and a well-founded custom not easily to be neglected, and whatever prompts one to the observance, if circumstances allow, the result is nearly always happy, even in this period of high prices.

Illinois Food Standards Commission, comprising John B. Newman, Thomas P. Sullivan, and Dr. W. S. Haines, visited New York, Boston, and Philadelphia during the past month, investigating methods of handling a city's milk supply and examining approved forms of ordinances to control production, shipping, distribution, and practical standards. Health authorities and large distributing concerns were conferred with, and inquiries made concerning all details of the milk industry.

One of the items given wide circulation recently by a pictorial press syndicate says: "Through the efforts of Mrs. Hirst, president of the New York Daily Food Alliance, a resolution will be introduced in the next session of congress asking investigation of dairy products. 'There is no food in the country today that needs inspection more than our butter,' Mrs. Hirst says. She maintains lime is used instead of water in preparing milk and butter for market."

The suit of the Calumet Baking Powder Company against Dr. E. F. Ladd, Food Commissioner of North Dakota, for \$100,000 damages, has been transferred by Dr. Ladd's attorneys to the Federal District Court for the northern district of Illinois.

New Revenue Law Effective September Ninth

Income Tax Doubled — Graduated Tax on Estates Above \$50,000 — New License Tax on All Corporations — Many Miscellaneous Taxes Continued — Present Stamp Taxes Will End with the Year.

WAR revenue taxes are revised by the new Omnibus Revenue bill signed by President Wilson on September 8, and going into effect the following day. One of the important operations of the new law is the practical repeal of the present stamp taxes. That is, the stamp act is allowed to expire by limitation next December.

The war revenue act was placed upon the statute books in December, 1914, and it was provided that it should remain in effect but one year. Last December, when it was seen that the European war was still in progress and the need of revenues still great, the Administration prevailed upon Congress to extend the act for another year. It will therefore expire by limitation.

The new revenue act will impose a tax of 12½ per cent upon the net profits of the manufacturers of munitions.

The law doubles the normal income tax. For the present tax is but 1 per cent, whereas it will in the future be 2 per cent.

The estate tax, which is a new venture in the Federal tax scheme, is somewhat more specific. The tax, which is graduated from 1 to 10 per cent, will apply upon the transfer of all estates of decedents who die after the enactment of the new law. Estates of less than \$50,000 will be exempt from this tax.

The miscellaneous taxes provided for in the new law are for the most part taken bodily out of the existing war revenue tax law. While it is stipulated that these are to apply from the present time on, the practical result will be merely a continuation of these taxes. These include the \$1.50 tax on beer, lager beer, ale, porter and similar fermented liquor. It provides for a change in the wine taxes to be levied upon all wine hereafter manufactured or imported into the United States.

The tax imposes a new license tax upon all corporations of 50 cents per \$1,000 fair value of capital. Capital is to include surplus and undivided profits. This tax will be applied on and after January 1, 1917. The law continues the \$30 tax on brokers, \$50 tax on pawnbrokers, \$20 tax on ship brokers, \$10 on custom house brokers, and changes the present tax on theaters, etc., to a graduated tax, operative on and after January 1 next. It likewise taxes proprietors of circuses and other exhibitions and proprietors of bowling alleys and billiard rooms. It also imposes a changed tax on tobacco manufacturers on and after January 1 next and increases the tax on cigarettes.

The specific and ad valorem duties provided in the new tariff on dyestuffs will go into effect immediately. These are 2½ cents per pound on the so-called intermediates and 5 cents per pound on finished dyes. The ad valorems are 15 per centum on the former and 30 per centum on the latter.

The remaining provisions of the bill, including the placing on the free list of all printing paper valued at less than 5 cents per pound, the creation of the Tariff Commission, and the provisions known as the unfair competition sections, including the retaliatory sections inserted by the Senate, all became a law September 9, the date upon which all provisions of the act, not otherwise provided for, became effective.

Unused Revenue Stamps Redeemable.

The National Wholesale Druggists' Association has issued the following in regard to the war revenue act: "Schedule B of the emergency war revenue act has been repealed by the omnibus revenue bill, which has just received the President's signature, taking effect Saturday morning, September

9. The revenue bill also repeals the documentary stamp taxes included in Schedule A of the emergency war revenue act, including all bills of lading, express receipts, telephone and telegraph messages. Manufacturers are now free to remove from their factory premises all goods included in Schedule B without payment of tax. Collectors of internal revenue have been instructed to assist manufacturers in the preparation of claims for the redemption of all unused stamps which have not been attached to goods. Refunds will also be allowed for stamps attached to goods which have not been removed from factory premises, provided the individual packages can be exhibited to deputy collectors in order that each stamp may be specially canceled. As to goods which have been removed from factory premises, the government holds that as the tax accrues upon removal no refunds can be made. The wine schedule of the act imposes taxes on liquors, cordials and 'similar preparations,' but medicines have been held by the Internal Revenue Bureau not to be included in this category. Wines, etc., used in the manufacture of medicinal preparations will therefore pay only the tax which attaches to them as beverages and no additional tax."

Baggage and Express Law Amended.

The Cummins amendment to the Interstate Commerce Law, which has caused wholesalers and manufacturers a great deal of trouble, in that it required travelers to declare the value of baggage and pay transportation charges accordingly, has been amended so that these requirements are no longer a part of the act.

The Interstate Commerce Commission, in interpreting the Cummins law, held that the carrier may compel the shipper to state the value of the goods tendered for shipment and that if the full value were not stated, the shipper would be liable to criminal prosecution under section 10 of the interstate commerce act, relating to misdescription of property, and also that baggage carried on passenger trains upon the ticket of the passenger is within the terms of the law.

The great inconvenience to the traveling public of checking baggage under this interpretation and the inconvenience to shippers of forwarding shipments by express at a declared or released value, and of paying transportation charges accordingly, led to the introduction, in Congress, of Senate bill 3069 to so amend the statute as expressly to avoid the interpretation put upon it by the commission. The bill passed both houses, has been signed by the president, and is now a law. The National Wholesale Grocers' Association was a big factor in securing the passage of this amendment.

Labels on Canned Salmon.

The counsel of the Wholesale Grocers' Association says: "Food inspection decision 105 has not been amended or superseded. These decisions give the government's interpretation of the United States Food and Drugs act, June 30, 1906, as applied to specific problems.

"In our opinion, food inspection decision 105 does not represent the law in so far as it would attempt to forbid the sale as 'salmon' of genuine salmon. In other words, if a product that is, in fact, salmon, clearly bears upon the principal label the name 'salmon,' without any designation of variety, we feel certain that the United States Department of Agriculture could not successfully and would not prosecute the shipper. It is, of course, true that when a label does specify any particular variety of salmon, it must be correct. Furthermore, inferior varieties of salmon must not, under any circumstances, be sold under labels indicating that the product is of better quality than is actually the fact."

The Inspection of Dried and Canned Beans

An Address Delivered Before the Michigan Bean Jobbers' Association, Grand Rapids, Mich., September 13, 1916.

BY W. PARKER JONES.

Assistant Chief in U. S. Bureau of Chemistry.

I PRESUME that the request of your president to have the Bureau of Chemistry send a representative out here to talk to you of what the Bureau is doing with reference to the protection of the public against adulterated foods was prompted by the feeling that you might be curious to know whether the Bureau is concentrating its activities under the Food and Drugs Act on Michigan beans. The Bureau has given a great deal of attention to the subject of both dried and canned beans, but it has not neglected other articles of food or drugs.

It will perhaps contribute to a better understanding of the activities of the Bureau if some of the time allotted to me is devoted to an explanation of the scope of the law itself. Notwithstanding the Food and Drugs Act has been on the statute books for more than a decade, that the Department has made continuous effort to disseminate information regarding it through bulletins and circulars and the public press, that thousands of prosecutions involving a great variety of products in different sections of the country have been brought, and that the Federal Courts have given us many illuminating decisions, the unceasing flow of inquiries which the Bureau of Chemistry receives daily demonstrates that there is still a more or less widespread lack of understanding of the scope of the law and the effect of its provisions. Some facts pertaining to it are well known. It is generally understood that the act is benevolent in character, being designed primarily for the protection of the public against deceptive labeling, and in some degree for the protection of the public health. It is not so well understood, however, that the act relates only to articles which are included within prescribed definitions of food and drugs, and to such articles only which are shipped or delivered for shipment in interstate or foreign commerce or are being imported into the United States or are manufactured, sold or offered for sale in the District of Columbia or a territory of the United States. The act does not apply to all articles which are produced or manufactured in one state and not thereafter shipped outside of that state; but any person selling or delivering for sale any food or drug in the same state may, however, incur the penalties prescribed by the act if, in accordance with Section 9, he guarantees that the article is not adulterated or misbranded within the act and the article thereafter enters interstate or foreign commerce.

The prescribed definitions of the words food and drug differ somewhat from their commonly accepted and usual meaning. For the purposes of the act, all articles used for food, drink, confectionery, or condiment, are foods, and all substances intended to be used for the cure, mitigation, or prevention of diseases of man or other animals are drugs. Wines, liquors, water and candy are, therefore, regarded as foods, and substances containing no medicinal agents may be drugs if they are intended to be used for the cure of disease.

Similarly, the terms "misbranded" and "adulterated" have a different meaning in the statute from that which attaches in every day use. The word "adulterated" naturally brings to mind an article debased by the substitution of an inferior for a more valuable ingredient such as sanded sugar or watered milk. The Food and Drugs Act deals with these forms of adulteration, but under it there are various other forms. Coloring of a food so as to conceal inferiority is an adulteration, and natural foods may become adulterated through careless handling or decay. The term "misbranded," apart from the statute, presupposes a labeling that is false and deceptive, but under the law an article may be mis-

branded if it bear no label at all, or even if it be properly labeled when it is sold under a name that belongs to another article. For example, foods in package form are misbranded if the package fails to bear a plain and conspicuous statement of the quantity of the contents. Foods are also misbranded if they contain certain specified substances unless the names of the substances and their quantity or proportion be stated on the label, and in a recent case which went to the Court of Appeals a food flavor deemed by the court to be properly labeled was held to be misbranded upon its being proved that the salesman had made false representations as to its identity at the time of the sale.

All misbranding, and many types of adulteration, can be



W. PARKER JONES.

corrected by the use of appropriate names and labels. The prevention of misbranding is of great commercial importance to manufacturers and dealers. It tends to compel square dealing and prevent fraud. It also tends to enable consumers to know the identity of articles which they purchase. None of the misbranding and few of the adulteration provisions have any other direct bearing on health. Although the fact is not generally recognized, the act is principally a labeling and not a health law. Adulterated foods fall into two classes. Whether one class is adulterated depends upon the label or name under which an article is sold. Change of name or label so as to correctly describe the product will take it out of the adulterated class. In the second class adulteration is inherent in the articles them-

selves, irrespective of names or labels, and cannot be corrected by naming or labeling. Included within this second class are articles which consist in whole or in part of a filthy, decomposed or putrid substance, or contain any part of an animal unfit for food, or contain any added poisonous or deleterious ingredient which may render the articles injurious to health. Confectionery is adulterated if it contains certain prohibited make-weights or any poisonous or deleterious ingredient, whether added or not.

Adulterated foods of both classes have been the subject of persistent investigation by the Bureau, and it may be expected that the investigation will continue with vigor. At the time the Food and Drugs Act was passed many articles of food in common use were either adulterated or misbranded. Among the familiar types of adulteration were the substitution of cottonseed for olive oil, cane and other sirups for maple sirup, wheat for buckwheat flour, watering of milk and of vinegar, dilution of flavoring extracts, mixing of shells with pepper and other spices, rotten eggs and egg products, floated shellfish, and decomposed vegetable products. Ten years of law enforcement have produced a marked change for the better, and some of the familiar types of adulteration, especially those wherein the adulteration was susceptible of being cured by changes in labels, are seldom met with today. But adulteration of food stuffs still exists to a great extent, and the forces of the Bureau of Chemistry are actively engaged in finding means to prevent it. In the past two or three years especially attention has been given to articles of food in common use, such as eggs, milk, citrus fruits, beans, tomato products, oysters and fish, especially sardines. The meat of interstate commerce is efficiently inspected under another law.

The handling of the egg crop of the country presents a great problem. For some years the Bureau through its Food Research Laboratory, has been striving to teach farmers how to get their eggs to market with minimum loss. Nevertheless, investigations under the Food and Drugs Act disclosed that there were being shipped many consignments eggs which contain large proportions of bad eggs, and that in some of the large cities these bad eggs have found their way into the manufacture of foods. Concerted efforts on the part of the inspectors put an end, to a considerable extent, to the traffic in rotten eggs for food purposes, but it soon became apparent that before any lasting benefit could be derived it would be necessary to strike at the source of the evil by stopping the shipment of bad eggs from the centers of production. Early in the present year the department issued a notice calling attention to the fact that moldy eggs, black spots, mixed rots, addled eggs, black rots, and any other eggs which are filthy, decomposed, or putrid are adulterated under the Food and Drugs Act. Announcement was made that in commercial practice cases of eggs did not receive even the lowest candled grades if the cases contain more than one and one-half dozen, or 5 per cent, of bad eggs, and country shippers were advised to candle their eggs before shipment in order to make certain of their freshness. Reports of inspectors who have been in the field and information received from other sources indicates that this announcement has resulted in a great improvement in the quality of eggs which have been shipped to market during the present season. It has been estimated that in one state from which great quantities of eggs are shipped in interstate commerce more than 80 per cent of two thousand egg handlers are in full accord with the attitude of the Department, and agree that its announcement has been of great value to the industry. Nearly all the others looked with favor upon the enforcement of the law along the lines indicated in the announcement, after the candling and grading of eggs had been explained to them.

Another problem of great size is the protection of the public against the consumption of adulterated milk. The proportion of the milk consumed and the country which can be reached under the Food and Drugs Act is very small, yet there are many localities which receive milk in considerable quantities from across the state line. The plan upon which the Bureau works is a co-operative one. It enlists, whenever possible, the active aid of the local authorities.

While its investigations are directed to ascertaining whether the Food and Drugs Act is being violated by the shipment of milk which contains water or is filthy or decomposed, it endeavors at the same time to induce farmers to produce better milk. With the limited funds and the limited force at its disposal, the Bureau is compelled to proceed slowly in this work, yet already a great improvement has been brought about in the milk supply in many localities.

It was formerly the habit of orange and grape fruit growers, both in California and in Florida, to pick the fruits from the trees while they were green, or partly green, in color and still immature and subject them to a sweating process so as to give the characteristic yellow color of ripe fruit and ship them to market. The incentive of the grower was the desire to secure the price advantages of an early market. The coloring of green citrus fruits so as to give them the appearance of ripe fruits makes them adulterated under the law. Several seizures of sweated oranges and sweated grape fruit have been made. The efforts of the Department along these lines were attended with such a degree of success during the last shipping season that the number of boxes of sweated, immature fruit which was sent to market, was cut in two. The process of sweating is not confined to domestic citrus fruits, but extends to citrus fruits which come in through ports of entry. The investigations of the department extend to fruits which are grown outside as well as to those grown within territorial United States, and will be continued during the coming shipping season.

Those of you who may be interested in this subject may obtain information as to the views of the Department regarding the application of the Food and Drugs Act to citrus fruits by referring to Item 164 of the Service and Regulatory Announcements of the Bureau of Chemistry.

The service and regulatory announcements have been issued, beginning early in the year 1914, as a medium for informing the public of the views of the Department regarding the application of the various statutes, with the administration of which it is charged. The service and regulatory announcements of the Bureau of Chemistry deal with the problems arising under the Food and Drugs Act. The rulings made in these announcements are expressions of opinion and do not have the force of law. They serve a very useful purpose, however, in acquainting manufacturers and dealers with the circumstances upon which they may expect to have prosecutions begun. As a general proposition, a great majority of manufacturers and dealers comply with the views of the Department as a matter of general principle. There are a few individuals, however, in every line of industry who prefer to run the chance of prosecution, rather than make any changes in their business practices until compelled to do so by the decision of a court. In its first issue of the service and regulatory announcements, the Bureau drew attention to the practice of canning beans which are moldy, musty or otherwise decomposed, and notice was given that products made from such material were manifestly contrary to the paragraph of the Food and Drugs Act which classes an article as adulterated if it consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance. This notice received wide circulation and it is believed became generally known through discussion in the press and in the trade. Notwithstanding this announcement, the practice of canning beans which the Department regarded as adulterated continued, and it was necessary to resort to prosecutions. We find in general that education by means of bulletins, circulars, press notices, and demonstrations is a valuable aid in securing compliance with the law, but it is frequently necessary to resort to prosecution in order to bring truths home in a manner that will make them stick.

When a reasonable time had elapsed after the issue of the announcement, the Department began to institute seizure proceedings against canned pork and beans which contained percentages of beans which were regarded as being partly decomposed, ranging from 15 to 75 per cent. Decomposition of the beans in most cases is due to the fact that the beans were moldy or musty, or were affected by anthracnose, dry

rot, or blight. The seizures were recommended upon the ground that the beans were decomposed and not at all upon the ground that they were injurious to health. It is sufficient to make beans adulterated under the Food and Drugs Act if they are partly decomposed, irrespective of the question whether they are injurious to health. Aside from the question of technical adulteration under the act, there are several reasons underlying the Department's action. Housewives ought not to be compelled to buy in cans beans which include large percentages of the kinds which they are accustomed to discard in sorting over dried beans. The canning and sale at a comparatively low price of cull beans and other beans containing a considerable percentage of decomposed beans by a few manufacturers lessens the reputation of the article and gives them an unfair advantage over their competitors who prefer to turn out an article of good quality.

Even though not injurious to health, decomposed beans are regarded as unfit for consumption. In making its count of decomposed beans, the Bureau has been very liberal, and it has also been liberal in fixing the limits which are considered as justifying condemnation of beans. In the beginning, the Department limited its seizure to canned beans which contained 20 per cent or more of unfit beans. This limit was reduced to 15 per cent, and during the current year seizures of canned beans have been recommended where more than 10 per cent of decomposed beans were present. The Department is reliably informed that it is entirely practicable for canners to turn out a product which will not contain more than 3 per cent of bad beans, and it may be anticipated that the limit set for administrative purposes in determining whether proceedings shall be instituted will be lowered very shortly to at least 5 per cent.

In all, since 1913, there have been seized more than 100 shipments of canned beans, including about one million cans. Of the cases which have been terminated after decrees of condemnation and forfeiture were entered, in 38 the goods were ordered destroyed; in 19 the goods were released upon condition that they would not be sold contrary to law, and about 50 cases are still pending.

The activities of the Government against canned beans gave rise to rumors which were circulated in the public press in Michigan that the Department had issued an order prohibiting entirely the shipment of anthracnose beans. These rumors were brought to the attention of the Department by Governor Ferris, and it was requested to define its position relative to the application of the Food and Drugs Act to dried pea or navy, medium and kidney beans. In October, 1915, an announcement was made in which it was stated that dried beans, in common with other articles of food, were adulterated if they consist in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance, and that "cull" beans contained large percentages of such beans. It was also announced that it had not been the practice of the Department to recommend the seizure of dried beans which were sorted, provided that they were as free from beans which were moldy or musty, or otherwise filthy or decomposed as they can be made by hand picking. No objection was raised in the announcement to the shipment from one state to another of field run beans, there to be cleaned and picked before being prepared for use as human food, and no objection was raised to the interstate shipment of "cull" beans for use other than as food for man. Shipments of dried beans are liable to be proceeded against under the present rulings of the Department under the following conditions: Shipments of "cull" beans to be used as food for man; shipments of beans which have been sorted and which contain more beans which are moldy, musty, or otherwise decomposed than are ordinarily present in beans which are hand picked in accordance with good commercial practice, namely, 3 per cent. On the other hand, the Department has not been proceeding against shipments of "cull" beans to factories where they are ground for food for animals, or against shipments of field run beans. It is plain, of course, that field run beans which contain beans which are moldy, musty or otherwise decomposed, are just as much adulterated under the law as beans which have been

sorted and which contain equal percentages of decomposed beans. Nevertheless, investigations of the Department fail to disclose that it is necessary to seek to prevent the shipment in interstate commerce of all beans which are offered in the same condition as gathered from the field in order to prevent their being used as human food. It may be expected, however, that if it develops that shipments of field run beans result in the canning and subsequent sale for food purposes of beans which are adulterated, the Department will adopt means to prevent it. Before changing the present practice in this respect, public notice will be given. If any of you obtain information which shows that the shipment of field run beans results in the use of adulterated beans for human food, the Bureau will be pleased if you will let us know about it.

In considering whether to begin proceedings against shipments of dry beans, the Department has observed the same limits as with respect to canned beans; that is to say, seizures were originally recommended where more than 20 per cent of beans which were decomposed were present. The limit has been gradually reduced to 5 per cent. The Department maintains that its allowances have been very liberal and that it is not to be expected that the limit which it set in the beginning for proceedings against either dried or canned beans should be long observed. It may be taken for granted that there will be no lessening of the present requirements, but that they will be made more rigid.

The proceedings which the Department has instituted against beans, both dried and canned, have had a beneficial effect. The number of canneries canning cull beans has been considerably reduced, both for interstate and intrastate commerce, and from the letters received from various branches of the industry the Bureau gathers the impression that the trade in general recognizes that the proceedings have resulted not only in benefit to the consumer but to the trade as well. The Bureau invites your cordial co-operation in its work to the end that violations of the law may cease and that the bean growers and the bean canners may feel that their industry is established on a firm and stable basis.

State Seal on Michigan Butter.

State Food Commissioner James W. Helme of Lansing was in Grand Rapids recently supervising the exhibit of State Brand butter which is being sold at the West Michigan fair.

"I got the idea from Denmark," said Mr. Helme, "where years ago they established a similar classification to induce dairymen to produce better butter. Persons there who make butter meeting the government standard are allowed to place the government seal on their packages and such butter commands higher prices than any other brand in Europe.

"At the last session of the legislature I obtained the passage of a bill affecting Michigan dairymen whereby if a certain standard is met the dairymen may use the State Brand seal. The state will print and issue the seals and they will be given to those who have qualified only as long as their butter maintains the standard set by the state. If we find any below standard we immediately shall stop the maker from using our seal.

"In this way we hope to standardize Michigan butter so that it will command a better price in the markets of the country. Four creameries have qualified thus far and we expect the others to do so in the near future. The co-operative creameries particularly are interested in the State Brand and many of them are taking steps now to acquire the standard of excellence necessary to get permission to use the seal in marketing butter.

"The mark is a seal of the state of Michigan and the words State Brand in large type."

To sell a decayed, rotten or "spot" egg is punishable in Illinois by a fine for the first offense of not less than \$1 or more than \$100, or 350 days in jail. For the second offense the fine is not less than \$25 or more than \$200 or one year jail sentence.

Drug Plant Growers Find the Market Limited

Mint, Belladonna, Digitalis, and Lemon Grass May Be Cultivated, but the Country Needs Only Small Supply

INTERRUPTION of importations of many drugs, spices and oils made from plants has resulted in certain cases in abnormally high prices for the raw materials and the products derived from them. As a result, many people are looking into the possibility of profit in growing these crops in the United States. Many letters are received each week at the U. S. Department of Agriculture asking how to raise this or that drug plant.

In almost every case, the drug plant specialists reply that it is doubtful whether the inexperienced grower can grow these plants successfully, or, if he succeeds, will find a satisfactory market for his crop. The raising of such plants, they point out, is a distinct specialty and calls for exact knowledge and skill comparable to that needed by the florist who, to satisfy his market, not only must raise flowers but must produce blooms at certain seasons and with unusual characteristics. Of even greater importance, however, is the fact that the total amount of drug plants that can be consumed in this country in any year is very small compared with our consumption of any of the staple crops. Overproduction in the case of drugs is more serious than in the case of staple crops, because staple crops, such as corn and grain, if not sold can be used at home for food or for feeding stock or chickens. The drug plant, however, is profitless to the grower unless a drug manufacturer will buy it for use in medicine.

It is entirely possible, for example, to grow belladonna, from which is derived atropine and other alkaloids very valuable in medicine. The total amount of belladonna plants the entire country uses, however, could all be grown on a few hundred acres. Because of the present interruption in the supply of belladonna, a few domestic growers have made a profit recently from this crop. A slight expansion of the industry would quickly increase the supply beyond the demand and this, together with importation, when resumed, might soon glut the local market and leave little or no profit to the raiser, unless an export market were developed.

Digitalis, although one of the most important and valuable of heart tonics, as a crop has relatively small monetary value. The drug plant specialists who have been developing this plant and testing possibilities of its culture in this country have done so, not merely with the idea of fostering an industry, but because this plant is so important in saving human lives that should all supplies be cut off a serious calamity would result. For the same reason the specialists have been working with many other drug plants. It was believed that the drug specialists should be ready to raise these plants in this country if for any reason the foreign supply should be entirely cut off.

For years, therefore, the Department has been producing many of these plants experimentally, but when the supply of certain of these drugs failed or their prices reached prohibitive figures, a few skilled growers, with the advice of the Department, were able to raise small quantities of some of the more important drugs needed in the present emergency. Thymol, widely used for antiseptic purposes, is a drug manufactured in Germany from a seed grown in India. A few days after the interruption of imports the price leaped from \$2 to \$17 a pound. The Department, however, had been experimenting with a common weed known as horsemint, which grows readily in the South and yields this substance. This horsemint was brought into cultivation, its drug-bearing quality improved, and a simple process for manufacturing thymol from it developed, with the result last year that there was produced commercially a small quantity of this drug. The industry, however, can not be widely extended because the total consumption, as indicated by previous reports, is only about 17,000 pounds a year, an amount which can be produced probably on less than 1,000 acres.

Lemon grass, producing lemon grass oil used widely by

soap and perfume makers, can be grown in Florida on land not suitable for citrus fruits. At most, however, only about \$100,000 worth of this oil is used per year in this country, and even if none were imported, only 2,000 or 3,000 acres of the grass could be raised without overproduction.

Red pepper, used both as a drug and as a condiment, seems to offer one of the most promising fields for replacing an imported by a domestic article. In 1915 in South Carolina 118 acres, yielding 152,000 pounds, were harvested. There is indication that this year nearly 500 acres may be devoted to this crop. As one acre produces nearly 1,300 pounds and our total imports in 1914 were only 8,829,487 pounds, it readily can be seen that a limited acreage would provide all the pepper this country ordinarily consumes.

Camphor trees, years of experiment have established, can be grown successfully in Florida, along the Gulf coast and in some coast regions as far north as Charleston. Only within the last seven or eight years, however, have the Department specialists considered it at all feasible to grow these trees as a source of camphor. The specialists have discovered that instead of being able to take camphor from trees only once in fifty years, as has been the rule, it is possible to produce camphor each year by pruning the leaves from the trees and distilling them. The possibilities offered by this discovery led to the planting of camphor trees and there are at present 1,000 acres of trees growing in Florida. A second tract of some 18 square miles is being cleared rapidly and planted. Importations of camphor in 1914 were only about 3,500,000 pounds, valued at \$929,000. A limited area in addition to that projected should supply all the domestic camphor for which there would be a profitable demand. The specialists point out that the domestic product, when produced in any volume, must compete in price with imported camphor. It is impossible, therefore, to estimate what prices growers could obtain for their product after full importations are resumed. This is especially true because prices for imported camphor in the past have been regulated more or less by foreign control, which, in the face of domestic competition, might make important reductions in the prices heretofore charged for the imported article, unless an export market be developed.

In addition to the products mentioned, there are hundreds of other drugs, oils and spices which are imported and which it is possible for this country to produce for itself. In the aggregate, the value of these imported articles is rather imposing, as the figures indicate that this country has been bringing in and using about \$25,000,000 annually of the various drugs, oils and condiments. Much of this money undoubtedly can be kept at home. The mistake made by most people who consider raising these crops is that they are inclined to consider them as staple crops, whereas the domestic demand for them is relatively small, and no foreign market has been developed for them by Americans.

At the same time those in charge of the work realize that here and there in our agriculture, where soil and climatic and other conditions are right, there is room for certain small industries. For many years there has been a distinct tendency for agriculturists to direct their energies along limited lines. This is indicated most clearly by certain types of agriculture prevailing in the South, where the farmers have confined their efforts very largely to the cultivation of a single crop. These small crops may therefore offer to a few of our farmers opportunities in highly specialized lines of production which will divert to a certain degree the activities of capital and labor from some of the crowded industries and also supply peculiar products for which the country has been spending money abroad. The drug specialists point out, however, that prices of these articles prevailing under the present disturbed conditions are abnormal and therefore should not be regarded as a safe basis on which to estimate regular returns from such activities.

American Pharmaceutical Association Meeting

Annual Convention at Atlantic City Well Attended and Many Papers of Interest and Importance Read During the Several Sessions.

DELEGATES to the annual convention of the American Pharmaceutical Association at Atlantic City, N. J., found profit and pleasure in the proceedings. The convention closed on Friday, September 8.

A committee appointed to report upon charges made by retiring President Alpers of Cleveland, in his annual address alleging the existence of a "system" within the national association, reported that it believed the charges to be unfounded. However, as the committee did not have full access to all of the facts and figures involved, it asked to be continued for one year. The convention agreed. In another report provision was made for a complete audit in future of all the financial records of the association as recommended by President Alpers.

Dr. James H. Beal, in presenting the committee's report, said President Alpers' charges were a "monstrous insinuation that pharmacists were exploiting the country for their personal financial profit." No action of the council, which President Alpers attacked bitterly, was valid, the report declared, until it was approved by the general body. The attack of the retiring president, if permitted to stand unchallenged, Dr. Beal said, would be used to the damage of the whole pharmaceutical profession in courts of justice or where legislation was sought.

The association voted to hold its 1917 meeting in Indianapolis. Tampa, Fla., Omaha, Cincinnati, Kineo, Me., Havana, Cuba, and Atlantic City tried for the convention. The new officers are:

Dr. Frederick A. Wulling, University of Minnesota, president; vice presidents, Leonard A. Sulzer, Detroit; Lucius E. Sayre, St. Lawrence, Kan.; Philip Asher, Urbana, Ill.; members of council, James S. Beal, Urbana, Ill.; William C. Alpers, Cleveland, O.; Harry Mason, Detroit; general secretary, William B. Day, Chicago; treasurer, Henry M. Whelpley, St. Louis.

Report of the nominating committee, presented by Dr. S. L. Hilton, Washington, D. C., proposed the following candidates for 1917-18:

President, William L. Cliff, Philadelphia; Charles Holzhauser, Newark, and H. P. Hynson, Baltimore.

First vice president, Frank L. Eldred, Indianapolis; A. L. Dohme, Baltimore, and Francis Helm, St. Louis.

Second vice president, Leonard E. Seltzer, Detroit; F. B. Haymaker, West Virginia, and Philip Asher, New Orleans.

Third vice president, Theodore D. Eadley, Boston; G. C. Bleakley, Oregon, and Louis Saltback, Philadelphia.

Members of the council, three to be voted for: F. J. Wulling, Minneapolis; C. B. Jordan, Indianapolis; M. I. Wilbert, Washington, D. C.; O. F. Clause, St. Louis; G. M. Beringer, Camden; A. B. Bolenbaugh, West Virginia; Joseph P. Alacan, Cuba; Thomas F. Main, New York, and L. D. Havenhill, Kansas.

These candidates will be voted for by mail during the coming year.

An interesting feature of the meeting of the section on historical pharmacy was the presentation by Dr. Otto Raubenheimer, on behalf of the New York German Apothecaries Society, of a portrait of Dr. Hans Julius Hager, German pharmacist, who was born in 1816. Dr. Hager's fame rests upon his work as a writer on pharmacy and as a pioneer in the introduction of the microscope in pharmaceutical science. His three volumes on the theory and practice of pharmacy, although written many years ago, still are a standard reference among modern pharmacists. As this year is the centennial of his birth, the New York German Apothecaries Society considered it particularly appropriate to present a picture of the famous pharmacist to each college that had conferred upon him an honorary degree

and each organization that had elected him to honorary membership. Dr. Hager was made an honorary member of the American Pharmaceutical Association in 1868.

Two papers read before the historical section had a particular interest for New Jersey pharmacists. E. A. Sayre gave a history of the New Jersey Pharmaceutical Association, while L. E. Sayre discussed pharmacy in New Jersey in the '60s as recalled by an apprentice. In the scientific section Dr. Charles H. La Wall of Philadelphia presented a resume of the results of a study of commercial samples of manna.

A committee of American women physicians representing the National American Woman Suffrage Association brought greetings to the convention and submitted for the consideration of the latter organization a set of resolutions indorsing equal suffrage. After some discussion the resolutions were referred to the House of Delegates for consideration and action. President Alpers thanked the women's committee for the greetings.

FOOD AND DRUGS ACT JUDGMENTS.

From the Bureau of Chemistry of the U. S. Department of Agriculture was issued, September 12, a Supplement of Service and Regulatory Announcements of 116 pages, containing notices of judgment under the Food and Drugs Act. No less than fifty cases of misbranding or adulteration are fully described in the pamphlet, and the subjects cover widely advertised remedies, so-called patent medicines, flavoring extracts, vinegar, and tomato paste. In the larger proportion of the cases the manufacturers pleaded guilty and paid fines ranging from \$10 to \$100.

Additional copies of the supplement may be procured from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 15 cents a copy.

PRODUCTION OF NUX VOMICA IN MADRAS.

Among the products exported from the Madras district to the United States in the first half of the current year nux vomica ranked seventh, following skins, cocoanut oil, pepper, coir yarn, indigo, and sandalwood, and amounted to 2,666,118 pounds, valued at \$134,097. In the calendar year 1915 they totaled 1,470,180 pounds, valued at \$52,489. These figures are from the report of Consul Memminger.

Nux vomica is shipped in the form either of seeds or of "pickings," the latter being husks or shells washed from the seeds. The product is of commercial value as being the source of the alkaloids strychnine and brucine. With the exception of Ceylon, which exports a limited amount of nux vomica, British India is said to supply the world. In addition to the alkaloids just mentioned the seeds yield a dye, which produces light-brown shades on cotton cloth, and an oil employed medicinally by native practitioners in India.

The snakewood, nux vomica, or strychnine tree (*Strychnos nux-vomica*, Linn) grows wild in the forests and is also cultivated to a limited extent in gardens in India. It is a moderate-sized deciduous tree of the Gorakhpur forests in Southern India, Bengal, Orissa, the Deccan, and Karnatak, moist forests in the Bombay Presidency, and deciduous forests all over India. The producing centers in the Madras Presidency are Tanjore, Trichinopoly, Pudukotah, Calicut, Rajahmundry, and Nellore. Shipments go mainly to London and New York; formerly Hamburg was an important mart. The average yearly production throughout India is estimated at 40,000 hundredweights (hundredweight = 112 pounds). Production is under the control of the Forest Department of the Government of India. The seed is included

in the general items of minor forest produce, and the right to collect is usually sold to the highest bidder.

Nux vomica seeds and pickings are obtained from the plum-like fruits of the tree. The fruit is collected and the seeds washed out and dried in the sun, or the seeds are simply gathered from the ground, but in the latter case they have little commercial value. They are roundish, flat, or concavo-convex in shape and silvery in color. The best seeds are known in the trade as fine, bold, and fresh. Their appearance should be "bright," that is, clean and silvery. Each nut contains about a half dozen seeds.

In the forests of Nellore, where the tree is common, the seeds are washed out by a forest tribe, the Yanadis, and a good price is obtained for them. Cochin nux vomica is collected in the dry deciduous forests at the foot of the Travancore hills and is sold at a low figure to small native dealers, who send it to the merchants. The nux vomica of the eastern coast finds an outlet at Cocanada, and shipments bear the name of Cocanada nux vomica. The Madras seeds come from Nellore and several other parts of the Presidency. Madras, Bombay and Cochin are the ports in India from which nux vomica is chiefly exported.

The current quotation for nux vomica in Madras at the end of June was 1 anna 3 pies (\$0.025) per pound. Nux vomica is packed in robbins or bags usually of 164 pounds when exported, the shipping ton being 14 to 16 hundred-weights net.

THE TREATMENT OF WOUNDS BY SUGAR.

At one of the recent sittings of the Société de pathologie comparee, Dr. Lhoste drew attention to the fact that he had on several occasions availed himself, in veterinary surgery, of the cicatrizing properties of sugar by powdering the wounds with this substance after washing them with salt water. In a few days the wound takes on a healthy appearance and heals rapidly, says the Paris letter of the Journal of the American Medical Assn. Dr. Grollet expressed the hope that this method of treatment would be tried in human surgery, in which it might hold its place in the treatment of septic wounds. It should be noted that the antiseptic properties of sugar have been long known, and in popular medicine this substance has always been considered to possess cicatrizing properties. At one time sugar alone or associated with naphthalene or iodoform was recommended as an antiseptic. Three years ago Dr. G. Magnus, of Marburg, as the result of experiments made in the service of Professor Koenig, recommended sugar as a practical and inexpensive dressing for wounds.

LEMON JUICE AND PEBBLES.

Two traditions, entirely contrary to fact, are so widespread as to deserve repeated public refutation. One often hears the very dangerous statement that water swiftly flowing over stones purifies itself within marvelously short distances. Sometimes even the number of pebbles necessary to bring about purification is stated. This tradition is just opposite to the truth, says the Bulletin of the California State Board of Health, for the principal agents in the self-purification of streams are sunlight, sedimentation, and the action of minute living organisms. These all require time and act best in quiet waters. That is why some of our cold, rapid mountain streams receiving pollution from careless campers and small groups of habitations are so dangerous. The other fallacy is that lemon juice added to drinking water will sterilize it and make it safe. Lemon juice is not an antiseptic and has no such effect. Always use pure water in making lemonade.

Canned Kraut Output.

It is estimated that 3,500,000 cases of canned kraut are annually packed and that the percentage of bulk kraut is a ratio of 16 to 1. That is to say, sixteen carloads of bulk kraut are packed to every one of canned.

Pure food and drink are essential to health.

CHEMICAL INDUSTRY OF THE UNITED STATES.

The chemical industry of the United States is making wonderful strides, as was shown in a paper read by Mr. John E. Gardin, vice-president of the National City Bank of New York, at the meeting of the American Chemical Society. It has quadrupled its output since 1880 and doubled since 1905. The capital invested is over six times as much as in 1880, and more than double that of 1905. The capital in 1880 was 29 million dollars, in 1910 155 million and in 1915 approximately 220 million, this estimate of capital for 1915 being based upon official figures of product of that year. The value of products turned out was in 1880 39 million dollars and in 1915 approximately 158 million.

In addition to this there is a large group of products, many of them very important, classified by the census as "allied industries," including fertilizers, dyestuffs, explosives, essential oils, wood distillation, sulphuric and nitric acids, bone, carbon and lampblack, and paints and varnishes. The value of the output of these "allied industries" is much greater than that of the group classed distinctly as chemicals, having been in 1880 approximately 72 million and in 1915 400 million; the capital employed in 1880, 57 million and in 1915 approximately 480 million.

This makes the grand total of output of the groups of manufacturers classed by the census as "general chemicals" and "allied industries" about \$550,000,000 in 1914 (census of 1915) and the capital invested approximately 700 million dollars, the 1915 figures of capital being estimates based upon known figures of output in that year and also known figures of capital in 1910.

Attention is especially called to the relation of capital employed to the value of output. It will be noted that a comparison of the figures of capital employed and product turned out in the appended tables shows a steady growth in the amount of capital utilized in the production of a given value of output. In the group, "general chemicals," the census figures show for 1880 twenty-nine million dollars of capital, and over thirty-eight million of products turned out. The 1910 census shows 155 million dollars' worth of capital and only 118 million dollars' worth of products turned out. This increase in the amount of capital utilized in producing a dollar's worth of chemicals has been steady and consistent. In fact, this general rule applies in most of the manufacturing industries, the capital employed, according to the census figures in 1910, thirty-five times as much as in 1850; the value of manufacturers only twenty-three times as much.

Chemicals form an important factor in the foreign trade of the United States, both as to imports and exports. Prior to the war imports of chemicals were largely in excess of exports, but the war has greatly increased the exportation of articles included in the general group "chemicals, drugs and dyes." The total imports of chemicals, drugs and dyes has grown from 48 million dollars in 1896 to 70 million in 1906, and 109 million in 1916. The exports of chemicals, drugs and dyes were in 1896 nine million dollars, in 1906 19 million, in 1914, the year preceding the war, 27 million, in 1915 46 million and in 1916 124 million.

The United States is apparently the world's largest importer of chemicals, the imports of Germany in 1913, the year prior to the war, being about 75 million dollars, Great Britain 70 million and France 50 million. The exports of Germany for 1913 were 140 million, Great Britain 60 million and France 25 million.

No Ptomaine Poisoning from Canned Goods.

It is reported that the National Canners' Association expect to prove through scientific investigation that ptomaine poisoning from canned goods is impossible. A research committee has been appointed with Henry Burden as chairman. It is estimated that \$30,000 will be required to carry on the work for three years. The wholesale grocers approve the purpose of this undertaking and wish the committee success.

During the past two years forest officers have killed nearly 9,000 predatory animals, more than three-fourths of which were coyotes.

American Chemical Society in Convention

Fifty-third Meeting, Held at Columbia University, in New York, Has Good Attendance and Interest, and Divisional Symposia Engage Eminent Scientists

FOLLOWING the opening of the great Chemical Exposition at the Grand Central Palace in New York, the fifty-third convention of the American Chemical Society began its sessions with a general meeting in the Horace Mann Auditorium of Columbia University. J. Merritt Matthews, president of the New York section of the society, presided, and Dr. Hazen Emerson, Health Commissioner of New York City, and representative of Mayor Mitchel, welcomed the chemists. Dr. Nicholas Murray Butler, president of Columbia University, greeted the members of the society present in an address which assured them of any service the faculty could render.

Dr. Charles Herty, president of the American Chemical Society, responded to the hearty greetings, and said the members were glad to meet in New York at the university. The New York section of the Society, with 1,200 members, is the largest division in the association, and all of its members rejoiced that strike conditions had not caused more serious trouble that would have affected adversely the coming together of the many sections.

There followed a brief business session, at which David T. Day told of the work that was being done by joint committees from twenty-two scientific societies of the United States toward providing a permanent memorial to Dr. Joseph A. Holmes, who would long be remembered as a great public servant. His life has been devoted to increasing the comfort and safety of workers in the mines, and it was the purpose of the joint committees to form an organization which would continue this work.

By vote of those present it was then unanimously decided to adjourn the meeting at the end of the week to the last week in December and first days of January, when the members will meet with Section C of the American Association for the Advancement of Science. It is intended to meet each four years, if possible, with this association, and the meetings this year would have been scheduled simultaneously—in fact, the invitation of the association had already been accepted—if the National Chemical Industries' Exposition could have been arranged in December.

Wilder D. Bancroft then presented a paper on the "Outline of Colloid Chemistry," in which he emphasized the enormous breadth of its scope, pointing out that it included practically everything that one does not think of when he thinks of chemistry. The paper dealt largely with the nature of colloids, with methods of making emulsions and their various properties.

"Coal and Coke By-Products as a Source of Fixed Nitrogen" was the subject of a paper read by Horace C. Porter.

At the public meeting held in the afternoon the subjects of the papers presented were less technical and of broader scope. Gen. William Crozier, Chief of Ordnance, War Department, was the first speaker, showing the relation of "Chemistry and the National Welfare." In a general way his paper dealt with the importance of chemical industries to national preparedness.

General Crozier was followed by John E. Gardin, vice-president of the National City bank, who spoke on "Chemistry and Banking." Capital is needed in greater degree, perhaps, than any other element in the development of chemical industries, so that his speech was received with interest not only by the public but by the chemists who attended the meeting.

The concluding speaker was Dr. Charles Herty, who described the "Expanding Relations of Chemistry in America."

Meetings of the various divisions were held in the afternoon, the seven departments being those of Agricultural and Food Chemistry, Biological Chemistry, Fertilizer Chemistry, Industrial Chemists and Chemical Engineers, Organic Chemistry, Pharmaceutical Chemistry, Physical and Inorganic Chemistry, Water, Sewage and Sanitation.

In the Division of Agricultural and Food Chemistry the

following programme had been prepared, the speakers covering a wide range in their addresses:

C. A. Browne—Chemical Factors in the Deterioration of Raw Sugars.

J. T. Snell and Mr. Van Zoeren—Maple Products, IX: On the Composition of the Soluble and Insoluble Portions of the Ash of Maple Syrup.

Dr. F. G. Wiechmann—An Increase in the Sucrose Content of Sugar Beets After Their Removal from the Soil.

Halsey Doran—Determination of Minute Quantities of Metal in Organic Substances With Special Reference to Lead in Urine.

Determination of Added Water in Milk.

Lucius P. Brown and Clarence V. Ekroth—The Relation of the Fat in Milk to the Solids Not Fat.

Lucius P. Brown and Clarence V. Ekroth—Chemical Quality of New York City Milk.

W. D. Bigelow and F. F. Fitzgerald—The Use of Hard Water for Cannery Purposes.

L. W. Ferris—Detection of Watered Milk by Means of Simplified Molecular Concentration Constants.

O. L. Evenson—The Estimation of Total Solids in Evaporated Milk by Means of the Babcock Formula.

J. T. Keister—Detection of Added Water in Milk by Means of the Freezing Point.

The Thursday divisional meetings were of continued interest, and the joint sessions no less so. Our report does not give the concluding sessions of the convention, but a resume of some of the more important papers on food topics will be given in the November issue.

RECENT PUBLICATIONS.

How to Know Foodstuffs.

The casual observer might not be attracted by the title of Leon A. Congdon's volume, "Fight for Food," but even a glance at its table of contents would arrest the attention of every serious reader. There is no topic of greater importance to the individual, for without food of nutritious quality and free from harmful elements there can be no healthful life. Mr. Congdon writes from exact knowledge. He has earned and received the university degree of Master of Science, at present is Division Chief of Food and Drugs in the Kansas Board of Health, and in former years served as chemist for the state departments of New Jersey and North Dakota. He has taken up the problem of pure and sanitary foods and drugs in a commendable spirit, and his book is valuable for its brief history of the laws of food control, as well as for its analysis of the serious problems of sanitary and economic service. Some prevalent misapprehensions are cleared away in his clear and vigorous statements.

Published by J. B. Lippincott Company, Philadelphia; \$1.25 net.

Foreign Trade Conferences.

Just now there is no topic of more sensational interest in high circles of commerce, the world over, than that of international policies when the European war shall have come to an end. In a little volume of 120 pages, entitled "European Economic Alliances," the subject is covered thoroughly, not only in statistics and declarations of intention, but as well in opinions set down by prominent writers. It is a valuable compilation, and practically indispensable to those who care to be informed on the conditions which are certain to affect the foreign trade of the United States.

Published by the National Foreign Trade Council, India House, Hanover Square, New York City; 25 cents.

Coming Conventions

Many Associations to Hold Annual Meetings in October

American Public Health Association.

American Public Health Association, forty-fourth annual meeting at Cincinnati, Ohio, October 24 to 27, 1916.

The membership includes the health officers of the leading cities in the United States and Canada, the executive officers of most of the state and provincial health departments and the leading officials of the United States and Canadian government health services, and in addition to these many bacteriologists, chemists, sanitary engineers, and sociologists. Within the association are six sections composed of the members of the association who are peculiarly interested in the special phases of public health. The various interests thus represented are indicated by titles of the sections: Public Health Administration, Laboratory, Sanitary Engineering, Vital Statistics, Sociology, and Industrial Hygiene.

The officers are: President, Dr. John F. Anderson, New Brunswick, N. J.; first vice-president, Dr. George W. Goler, Rochester, N. Y.; second vice-president, Dr. Charles J. Hastings, Toronto, Canada; third vice-president, Dr. Omer R. Gillette, Colorado Springs, Colo.; secretary, Prof. Selskar M. Gunn, Boston, Mass.; treasurer, Dr. Lee K. Frankel, New York, N. Y.

National Coffee Roasters' Association.

The sixth annual convention of the National Coffee Roasters' Association will be held at the Marlborough-Blenheim Hotel, Atlantic City, N. J., November 14, 15, 16 and 17, beginning at 11 a. m., on Tuesday, November 14. The annual banquet will be held in the Marlborough-Blenheim on Wednesday evening, November 15, thus departing from the custom which has prevailed in the past of holding the banquet on the last day of the convention.

This convention will be unique in that it is the first time in the history of the association that a convention has been held in any city where there is no member of the association, but the committee in charge of this feature has arranged a program which will satisfy all in attendance.

On Monday, November 13 (the day before the opening day of the convention) there will be a golf tournament for members and their friends on the links of the Sea View Golf Club. The committee in charge of this is headed by Chairman Frank C. Russell, of Russell & Co., New York.

National Cannery Association.

Calls have been sent out for meetings of the following committees of the National Cannery Association, to be held in Chicago, at the Hotel La Salle, on the dates given:

- October 17th—Research Committee.
- October 18th—Officers of Sections.
- October 18th (evening)—Finance Committee.
- October 19th—Executive Committee.
- October 20th—Program Committee.

American Specialty Manufacturers.

The annual convention of the American Specialty Manufacturers' Association will be held at Pittsburgh from November 15 to 17, inclusive. Thirty-five companies are included in the association. Carl A. Lautz, of Lautz Brothers & Co., Buffalo, is president.

Iowa Dairy Association Convention.

Iowa State Dairy Association convention will be held at Waterloo, October 3, 4, 5, 1916. Judge W. B. Quaston of Algona is president, and F. W. Stephenson of Oelwein is secretary. The Dairy Cattle Congress will be held at the same place at the same time, and a big pure food show will be given in conjunction.

National Wholesale Druggists' Meeting.

The forty-second annual convention of the National Wholesale Druggists' Association will be held at Baltimore, Md., October 2 to 6. The proceedings will be under the direction of President Charles Gibson, of Walker & Gibson, Albany, N. Y.

American Bottlers' Protective Association.

The committee of arrangements has fixed on St. Louis, Mo., and October 11, 12 and 13 as the place and dates of the annual convention of the American Bottlers' Protective Association. C. A. Houtz, 1808 Biddle street, St. Louis, Mo., was chosen secretary, and all communications pertaining to the convention should be addressed to him. A cordial invitation will be issued to all the bottlers throughout the United States requesting their attendance.

Meat Packers' Association.

Preparations for the eleventh annual convention of the American Meat Packers' Association, at Cincinnati, O., October 9, 10 and 11, are nearing completion. This is the first time Cincinnati has had the convention and the packers of that city are making elaborate arrangements for entertaining the visitors.

National Fish and Game Commissioners.

The annual meeting of the National Association of Fish and Game Commissioners will be held in New Orleans, October 12-14. Conservation work in all its details will be discussed and illustrated.

American Fisheries Society.

The forty-sixth annual meeting of the American Fisheries Society will be held in New Orleans, October 16-19. The United States Bureau of Fisheries will be well represented at the meeting.

Farmers' National Congress.

The annual meeting of the Farmers' National Congress will be held at Indianapolis, Ind., October 17-20. J. F. Griffin is the secretary.

New England Master Bakers.

The annual convention of the New England Tri-State Association will be held at Portland, Maine, October 11-12.

Kentucky Master Bakers.

The annual convention of the Kentucky Association of Master Bakers will be held at Paducah, October 17-18.

National Ice Cream Manufacturers.

The sixteenth annual convention of the National Association of Ice Cream Manufacturers will be held at Atlantic City, N. J., October 10 to 13, both inclusive.

National Creamery Buttermakers.

The convention of the National Creamery Buttermakers' Association will be held in Minneapolis, Minn., November 14-16. The secretary is Martin H. Meyer, 888 Forty-fourth street, Milwaukee, Wis.

National Poultry, Butter and Egg Men.

Important questions will be discussed at the annual convention of the National Poultry, Butter and Egg Dealers' Association, to be held in Chicago, October 9-10. It is expected that the attendance will be larger than at any previous meeting.

Nut Growers' Annual Convention.

The 1916 convention of the National Nut Growers' Association will be held at Jacksonville, Fla., November 22, 23 and 24.



Notes from Field of Food Control



Chicago Hearings on Jams, Jellies, and Preserves.

The Illinois State Food Standard Commission announces a public hearing to be held at the rooms of the Illinois Food Department, 1627 Manhattan Building, Chicago, Illinois, at 10 a. m., Thursday, October 26, 1916.

This hearing will be confined exclusively to the question of declaring on the label the quantitative or percentage composition of jams, jellies, and preserves.

As already announced, briefs may be handed in, but they must be submitted before the day of the hearing and are to be read at the meeting for the purpose of discussion.

W. SCOTT MATTHEWS,
DR. WALTER S. HAINES,
THOMAS P. SULLIVAN.

Public Hearing on Spices.

A public hearing on definitions and standards for spices will be held in New York on October 16, 1916, by the joint committee on definitions and standards representing the U. S. Department of Agriculture, the Association of Official Agricultural Chemists, and the Association of American Dairy, Food and Drug Officials. All persons interested are invited to attend. Those who desire may present their views in writing to the secretary of the committee, Bureau of Chemistry Building, Washington, D. C., on or before the date set for the hearing. It is desired by the committee to obtain all possible information from the trade and others on the question of definitions and standards. The hearing will be held at 10 a. m., on October 16, 1916, in the office of the U. S. Food and Drug Inspection Laboratory, Room 1012, Appraiser's Stores, Christopher and Washington streets, New York, N. Y.

To Prevent Soaked and Adulterated Oysters.

With the opening of the oyster season the food and drug officials of the U. S. Department of Agriculture have given notice to those who ship oysters in interstate commerce that they will continue their active inspection to prevent shipment of polluted oysters or shipment of shucked oysters that have been soaked to increase their bulk. This notice applies also to dealers of oysters in the District of Columbia and the Territories, which are directly under Federal supervision.

Those in charge of this work report that the oyster trade in general have expressed a desire to co-operate with the Department in securing a grade of oysters which are free from adulteration of any kind. Many have asked the Department to suggest a method of washing oysters without swelling them to an extent that constitutes adulteration under the regulations. The Department believes that moderate washing is probably necessary and desirable, but objects to any method of excessive washing which increases the volume of the oysters to an appreciable extent, either by permitting the oysters to remain in the liquid and absorb the water by the so-called "plumping" method, or by the introduction of an excess of free liquid in the containers in which the oysters are shipped.

Notice to Makers of Tomato Products.

The Department of Agriculture has been requested to inform manufacturers and dealers in tomato products of the tests which it applies in arriving at its decision whether to recommend proceedings under the Food and Drugs Act against tomato products.

Under section 7 of the act, articles of food are adulterated if they are found to consist in whole or in part of filthy, decomposed or putrid animal or vegetable substances. In circular 68 of the Bureau of Chemistry there were announced the numbers of yeasts and spores, bacteria and molds which, in the opinion of the Department, may ordinarily be found in tomato products handled with reasonable cleanliness in the process of manufacture. Examination of a large num-

ber of tomato products and tomato canneries convinces the Department that it is entirely practicable for manufacturers to keep the yeasts and spores, bacteria and molds within the limits stated in circular 68. Though the Department has not recommended proceedings under the Food and Drugs Act unless the product, upon examination under the conditions prescribed in circular 68, was found to contain yeast and spores or bacteria or mold filaments in excess of the following numbers: Yeast and spores per 1/60 cubic millimeter 125; bacteria per cubic centimeter 100,000,000 mold filaments in 66 per cent of the microscopic fields, it is considering the adoption of figures approaching those given in circular 68. When such a scale has been adopted public announcement will be given.

Since circular 68 was issued, there are being produced, in increasing quantities, tomato products of varying degrees of concentration. The Department is considering the adoption of a scale for testing tomato products, varying with the degree of concentration. If it is decided to adopt such a scale, public announcement will be given.

Pennsylvania Cold Storage Law Held Unconstitutional.

In the Allegheny Common Pleas Courts early in September Judge Carpenter decided that Section 16 of the Pennsylvania cold storage food law was unconstitutional. The section in question makes various articles unsalable after they have been in storage for a certain period, regardless of their condition. Among these articles is butter, which cannot be sold in Pennsylvania after being stored nine months. This court holds that this provision is confiscatory and bad.

Edward J. Nolan, a wholesale butter dealer of Pittsburgh, had 78 tubs of creamery butter on which the time limit had expired. The butter, however, was as fit for food as it had ever been. The Dairy and Food Department sought to put tags on it marked "Unsalable," and the owner asked the court for an injunction, which was granted. The following is from the court's opinion:

"Section 16 of the cold storage act of 1913 conflicts with the constitution of Pennsylvania in that it violates the provision of the 'declaration of rights.'

"Section 16 violates the fourteenth amendment to the constitution of the United States, which reads:

"'No state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States, nor shall any state deprive any person of life, liberty or property without due process of law; nor deny to any person within its jurisdiction equal protection of the law.'

"Being of the opinion that the plaintiff is without adequate remedy at law and that he is entitled to equitable relief, the injunction prayed for is allowed."

The decision will have a most important effect on the enforcement of the Pennsylvania cold storage act; in fact, if upheld, it will practically emasculate it.

It follows that if the time limit on butter is illegal, the time limit on other food products is illegal also.

Dairy and Food Commissioner James Foust declared that his division of the Department of Agriculture would continue to enforce the cold storage act notwithstanding the adverse ruling on the time limit clause.

The state will appeal from the Allegheny county decision, and its determination to enforce the act means that eggs stored in April, for instance, must be out of storage by the proper date in December and that it will apply to all products covered by the cold storage act.

Medical Inspection for Food-Handlers in Indiana.

The Indiana state board of health, through H. E. Barnard, state food and drug commissioner, has issued an order, effective October 1, which will result in compulsory medical examination and successful passing of such examinations by all persons employed in food-handling establishments in the state. The medical inspection of such food-handlers has

been going on in some localities of the state for some time, but the state-wide order is intended to compel such inspection and the elimination of all persons affected with communicable disease, or carriers of such disease, from food-handling occupations throughout the state.

The order to all inspectors of the state board of health carries a penalty for proprietors of such establishments who fail to comply with the law's provisions. Wherever such an employer does not comply with the law hereafter, his place of business will be reported as "bad" to the state food and drug commissioner and he will thereupon act on a recommendation from the inspector that the place be "condemned" by the state board of health, the condemnation "to remain in force until the required medical certificates have been filed with the local health officer."

Illegal Traffic in Game.

Twenty-five persons handling game in interstate commerce in violation of the Lacey act have received jail sentences, and a number of others have paid an aggregate of \$12,500 in fines during the last four years. The fines range from \$1 to \$200, the latter being the maximum prescribed under the law. Some 700 cases in all have been investigated and of these 350 have been reported for prosecution by the Bureau of Biological Survey of the department, which has charge of the administration of this statute.

The number of birds illegally shipped, and on which prosecutions were instituted, were 37,740 quail, 3,032 partridges (ruffed grouse), and 3,252 ducks. These figures represent, however, only the shipments in which the bureau was able to get evidence sufficient for prosecution. Venison also figured largely in illegal shipments, as upward of 10,000 pounds of this were shipped in violation of the law.

The bureau also has compiled information which indicates that in addition to the figures cited above, large numbers of birds have been shipped illegally under such conditions that the representatives of the department were not able to establish cases complete enough to warrant prosecution. It is believed that at least 99,523 quail were illegally shipped, and of these, 55,054 were from the States of Maryland, North Carolina, and Virginia. The number of partridges (ruffed grouse) involved was 10,302, and of ducks, 6,252. The number of ducks shipped illegally, at first thought, seems surprisingly small, because shipments of wild ducks greatly exceed those of any other wild game bird. It happens, however, that some of the States have not yet prohibited export of wild ducks, while others only recently have been able to make their laws effective in this particular. Reliable records show, for example, that at least 100,000 ducks were exported annually from the Big Lake district of Mississippi County, Arkansas, under a law permitting the export of ducks from that county. This law, however, was declared unconstitutional by the Arkansas Supreme Court on Feb. 15, 1915, and this decision will bring this traffic within the purview of the Lacey act.

U. S. Grain Standards Act.

The United States Grain Standards act, which gives the Secretary of Agriculture authority to establish, as soon as may be, official grain standards applicable to grain shipped in interstate or foreign commerce, became a law on Aug. 11, 1916.

The act authorizes the Secretary of Agriculture to investigate the handling and grading of grain and to establish, as soon as may be, standards for corn, wheat, rye, oats, barley, flaxseed and other grains. Not less than 90 days' public notice must be given in advance of the date on which any such standard becomes effective.

Feed Manufacturers on Hominy.

At a meeting of the executive committee of the American Feed Manufacturers' Association on September 5, the following definition for hominy feed, meal or chop was prepared and Secretary L. F. Brown was instructed to transmit same to the Bureau of Chemistry, Washington, D. C., for the consideration of that bureau. The procedure was due to a

hearing held by the bureau in Chicago on July 12, for the purpose of endeavoring to secure information looking towards a possible amendment to the present definition:

"Hominy feed, hominy meal or hominy chop is a kiln-dried mixture of the mill-run bran coating, the germ with or without a partial extraction of oil, and a part of the starchy portion of the white corn kernels, obtained in the manufacture of hominy, grits, or meal for human consumption."

Indiana Druggists and Doings Inspected.

The report from H. E. Barnard, Indiana State Food and Drug Commissioner, for the last month showed that of a total of forty-one drug stores, throughout the state, inspected for insanitary conditions or improper condition, one was graded as being "excellent," while thirty-two were reported as being in "good" condition; and eight were reported as in "fair" condition from a sanitary standpoint. No drug store inspected was either rated "poor" or "bad." The total number of inspections during the month reached 652 and the drug stores were on a much higher average, generally speaking, than the other classes of establishments inspected.

No drugs were declared illegal by the state chemists, out of all the samples analyzed at the state laboratories during the month, with the exception of one "miscellaneous" sample. The nature of this sample was not even made public. Six samples of ice-cream, out of a total of thirty-four samples, were found to be illegal in content, however. Whether these were taken from drug stores was not made public in the report.

Maryland Orders Single Use Glasses.

The Maryland State Board of Health served notice on all druggists and dispensers of soft drinks that glasses in which they have been serving drinks to their customers must not be used after September 1, unless they are willing to destroy the glass after it has been used once.

The practice in drug stores has been to give the glasses a simple rinsing in running water each time they are used. This, the health authorities think, is insufficient.

After September 1 paper soda water "glasses" were expected to be in style. Any violation of the order will bring a fine not exceeding \$500.

Finding Consumers for Damaged Foods.

Leon A. Congdon, who is chief inspector of the Kansas Board of Health, and also state hotel commissioner, has sent out a warning to Kansas hotels, restaurants, and boarding houses against purchasing so-called "salvage" or damaged food supplies from certain wholesale grocery houses making a specialty of this line.

From the Federal pure food authorities Mr. Congdon had just been notified that shipments of goods from lots not fit for consumption had been traced from the wholesalers to such destinations as a boarding house for Kansas University students at Lawrence and for different hotels in Kansas.

Oleo Ingredients Pasteurized.

The official order of the Bureau of Animal Industry, having supervision of the federal meat inspection service, is as follows:

"Milk and cream used in the preparing of oleomargarine should be pasteurized, and butter used for this purpose should be made only from pasteurized products. The owners and operators of official establishments where oleomargarine is prepared should take immediate steps to insure the pasteurization of all milk and cream used in preparing oleomargarine, and after the present year all butter used in oleomargarine shall be made from pasteurized products. This advance notice respecting butter is given in order that contracts for purchases may be made accordingly."

Deputy Commissioner Herbert A. Emerson of the New York State Department of Foods and Markets has resigned, to go into business.

Tennessee State-Wide Search of Egg Markets

Co-operative Investigation by State and Federal Inspectors That Resulted in the Accumulation of Valuable Information Concerning Trade Conditions, the Giving of Needed Instructions for Observance of Food Laws, and the General Satisfaction of Dealers Who Welcome Improvements.

[The following report was made to Harry L. Eskew, Tennessee State Food and Drug Commissioner, at Nashville, by D. J. Frazier, one of his staff of inspectors.]

IN accordance with your instructions I made a special tour of the state in co-operation with U. S. Inspector C. T. Smith, for the purpose of making investigation of the egg market.

We began this work on June 7th and continued to August 12th, 1916, visiting a number of points in each division of the State.

The purpose of this tour was twofold: first, to gather general information in regard to the condition of the egg trade in the State, and second, to enforce the law against the sale of bad eggs. The cooperative plan was doubly effective in accomplishing these purposes, as we were able jointly to go into both State and interstate transactions. With these ends in view we planned to visit as many as possible of the most important egg handling centers in all sections of the State.

On arrival at a town our rule was first to go to the freight and express offices and get lists of recent shipments, both in and outbound. This gave us information on the business, who the dealers were, territory collected from, destination and volume of business. Next, we usually visited the dealers to procure further information in regard to the volume of business, their methods, equipment, etc., making particular note of the candling equipment, methods and efficiency. Particularly we made it a point to investigate lots recently received and still uncandled, with a view of detecting violations of the State law in case of intrastate transactions and violations of the Federal law in case of interstate shipments. After attending to routine work as outlined above at many of the towns visited, I also found time to investigate the retail trade by visiting groceries, restaurants, hotels, bakeries, etc.

We also took especial pains to give instructions and information in regard to the law, rulings, decisions, etc. This appeared to be appreciated by nearly all persons with whom we had to deal. We were very much gratified to receive many expressions of hearty cooperation by a majority of the dealers, as well as numerous congratulations on the good effect our campaign was producing.

Following is a list of the towns visited in the order named: Algood, Cookeville, Brush Creek, Watertown, Lebanon, Murfreesboro, Bell Buckle, Wartrace, Shelbyville, Tullahoma, McMinnville, Decherd, Winchester, Fayetteville, Petersburg, Lewisburg, Columbia, Culleoka, Pulaski, Clarksville, Chattanooga, Cleveland, Athens, Sweetwater, Knoxville, Morristown, Johnson City, Bristol, Harriman, Livingston, Cookeville, Sparta, Jackson, Milan, Paris, McKenzie, Martin, Union City, Dyersburg, Memphis and Nashville.

Besides the towns directly visited we were able to reach many other towns, country stores, etc., through finding and testing lots of eggs shipped or delivered to the dealers in the towns actually visited.

On this tour we visited 93 produce houses and egg dealers doing an estimated volume of business of 12,473 cases weekly. Out of this number 37 admitted that they were buying eggs "straight" or "case count," 38 claimed to be buying "loss off," and 18 were buying both ways. It was stated by several of those who claimed to be doing business on a "loss off" basis that this method had only recently been taken up after having learned of the "egg campaign." This policy I believe was adopted in most cases as a means of protecting their patrons, who it was realized were violating

the law, and were laying themselves liable to prosecution by this department. Practically all of those who were still buying "straight" gave competition as the excuse for not changing to the "loss off" basis (paying only for good eggs). This is doubtless in a measure true; at least they fear that they may give their competitors an advantage over them if they change methods. Another reason, I suspect, is that they have made some money by the old method and are loath to give it up for another with which they are not familiar. Buying "straight" is necessarily a species of gambling, since dealers are compelled to "take chances," and consequently it has a fascination for men who have some "sporting" instincts.

However, the "loss off" method is the only correct one, and wherever adhered to has a good effect on the egg market. It offers no inducement to the producer to bring bad eggs to market, and encourages him to take better care in the gathering and marketing of his eggs.

Cooling rooms or cold storage facilities were found as a part of the equipment at 15 of the establishments visited. Ten of these were rooms or compartments cooled by icing, and five had regular brine or ammonia refrigerating plants.

This is a very commendable feature of the business and of much economic value during the hot weather, as it enables the dealer to hold eggs practically without loss for several days pending the accumulation of carload lots or waiting for more favorable prices.

The number of samples tested (candled) coming under jurisdiction of the State Department was 112. Of this number 69 samples ran more than 5 per cent bad (inedible), and 43 samples contained 5 per cent or less; average of all samples 11.38 per cent inedible. Of the samples tested, some were purchased as official samples, some were in possession of dealers with intent to sell, and the balance were lots sold straight to produce dealers by merchants, hucksters, farmers, etc.

Notices of hearing were given or recommended to be given in all cases reported as illegal. Warrants were sworn out in ten cases. In three cases the defendants entered plea of guilty and were fined \$10.00 and costs, two waived examining trial and were bound over to circuit court under \$550.00 bond each; two others after going into examining trial were also bound over, and three cases were dismissed upon my recommendation. I presume that other illegal cases will yet be prosecuted after hearing has been given.

A number of other tests were made for the purpose of ascertaining candling methods, efficiency, etc., but were not officially reported. These tests were made primarily by candling, and all doubtful eggs verified by breaking. In most cases we were able to use the equipment in use at the produce houses, in other cases improvised candlers were made by using flashlights.

I assisted Mr. Smith in examining 27 interstate shipments which ran more than 5 per cent bad. A number of other shipments ran 5 per cent or below. With one exception the 27 illegal interstate shipments were from adjoining states into Tennessee, one shipment being from Tennessee into an adjoining state. Also as a result of information obtained in our co-operative work, I understand that one carload of eggs from Tennessee was seized by the government at its destination at an eastern market.

Various candling devices were found in use. The ordinary electric light candlers in dark rooms are the kind most commonly used. There is now being introduced, a patent candler which obviates the necessity of a dark room and is

so constructed as to be supplied with light from an ordinary electric drop light or by a battery light. This device is generally in high favor with candlers, since it overcomes the unhealthful and disagreeable necessity of being confined in an ill ventilated dark room. Some dealers are using candlers lighted by ordinary oil lamps, and at one place they are still using the original method—candling by the light of candles.

Several dealers were found using a method of candling by daylight or sunlight which consists of a dark room with one or two apertures to admit the light from the outside. This method is not very efficient on dark days or at a time of the day when the sun is on the opposite side of the house from the candling room. At one town a patent daylight or sunlight tester was found in use, and is an improvement on the foregoing method.

However, the carefulness and efficiency of the operator counts for more than the kind of device used. Any operator can do better work by using the method with which he is thoroughly familiar. We found varying degrees of work being done ranging from complete elimination of all bad eggs down to a mere pretense of candling. It was very noticeably apparent that candling is more thoroughly done when the eggs were purchased "loss off" (or subject to dealers' candling) than when purchased "straight" or "case count."

Very few dealers were found to be grading, more than to take out "crax," "dux," "ginnias," "small" and "dirties," these usually being disposed of locally to bakeries, restaurants, hotels, boarding houses and individuals.

On making inquiry of the different dealers as to disposition of rots, we were informed that they were "dumped," buried, burned, and in a few instances, fed to hogs. This latter method of disposition I suspect is more prevalent than answers given would indicate, as in many cases dealers seemed reluctant to answer the question and for some reason gave evasive answers, such as "hailed out to the woods," "carried out on a farm," "dumped in an old field," etc.

Investigation of the retail trade disclosed lax and indifferent methods of handling eggs. Grocymen and other retailers in only a few instances were taking the precaution to candle or to buy candled eggs. However, it is encouraging to note that a few progressive retailers have installed and are using candling devices, and some country merchants have installed candlers and are refusing to pay for any but good eggs. A few dealers were undertaking to "candle" by holding in the hand before an open light. This method is not at all satisfactory, the only results accomplished being the elimination of distinctive black rots. Mixed rots, blood rings, spot rots, stuck yolks, red rots, etc., with a few exceptions, cannot be detected by this method.

In fact it is very little more than a mere pretense of candling, and its use was discouraged wherever found and the installment of proper equipment and use of correct methods recommended.

Most retailers claim to replace eggs reported bad by their customers, but I am of the opinion that this would not be a legal defense if bad eggs are delivered. The offense was committed when the eggs were sold. Consumers as a rule have become so accustomed to getting a few bad eggs with the good, that in most cases they take it as a matter of course and say nothing about it. Besides it is too much trouble to keep track of the matter and put in claim for rebate for a few bad eggs in a dozen. Furthermore, replacing the eggs does not make up for the disagreeable task of breaking and disposing of bad eggs, nor the inconvenience caused by not having the required number of good eggs at the time when they are needed. Doubtless a very considerable number of bad eggs have been put off on the consumer in this way.

We found considerable number of eggs shipped into Tennessee from adjoining states, but these were in most cases minor border shipments purchased by Tennessee dealers who re-handle and again ship out of the state. At Memphis, however, we found a great many eggs coming from adjoining states for local consumption.

Probably 50 per cent or more of the inferior grade of eggs are consumed in the state. This is to be expected in a producing state like Tennessee, for the reason that many of the weak, shrunk and "heated" eggs which barely pass as edible could not be expected to stand shipment to distant points and for the reason that the better grades usually command better prices on the eastern markets than the usual prevailing retail price at home.

Only one egg breaking establishment was found in the state—Harbin Bros., at Chattanooga. This feature of their business has only recently been undertaken and is as yet only in the experimental stage. No suitable room with proper equipment and accessories has as yet been provided. The work is down in the basement where candling is also done.

The breaking is done by two negro women, who break the eggs out into glass tumblers and then put into 25 or 50 pound tin pails. "Crax," "heavy heated," "weak" and near blood rings are broken out and occasionally one is found which is too far gone to be used, is dumped into the rot tub, and the glass rinsed in a vessel of cold water kept handy for the purpose. The eggs are frozen and sold principally to bakeries. Mr. Alvin G. Kennedy, the manager, stated that if the business proved profitable the firm contemplates installing a thoroughly equipped up-to-date breaking plant.

Altogether I regard the work as having been a success and as having had a far-reaching effect toward bringing about better conditions of the egg market in the state. It is estimated that the value of the eggs produced in Tennessee amounts to over eight million dollars annually. On the basis of the average per cent of bad eggs in tests actually made, and allowing for deterioration in value from holding and improper handling the annual loss to the state can safely be estimated at over one million dollars. A large per cent of this loss could doubtless be saved to the state by proper care in handling, storing and marketing, and I am decidedly of the opinion that strict enforcement of the law all along the line from producer to consumer would have a very wholesome effect in helping to save this loss, in raising the standard and consequently the price of Tennessee eggs, and in insuring to the consumer a more wholesome article of food.

There is yet much to be done. Many towns of considerable importance as egg handling points have not yet been reached in this work, and the retail trade barely touched in a few places. I would therefore respectfully recommend that the department's field force be put on this work, especially the retail end of it, putting as much time on it in their respective territories as can be spared from other important duties while on their regular rounds.

I desire to especially acknowledge the valuable assistance and hearty co-operation of Mr. C. T. Smith, with me in this work. Our work together has been harmonious. I find him to be a tireless worker, enthusiastic, and on the alert in detecting violations of the Federal Food and Drugs law

Vegetable Growers in Convention.

The recent rise in the prices of vegetables is due to a general crop shortage caused by drought and insects, according to delegates to the convention of vegetable growers who opened their annual session in Chicago September 25. Still higher prices are expected as the season advances. The war has not greatly affected the American vegetable market except in the matter of beans and peas, huge quantities of which have been shipped to Europe. Model truck farms were laid out and exhibits of farm implements and vegetables were arranged on the nineteenth floor of the hotel. Growing vegetables were shown in many of the miniature farms which had been laid out under the direction of Fred Lautenschlager and Alfred Dietsch of Chicago.

The odorless onion will soon be given to the world, according to delegates to the convention. "It will be an onion that any one can eat and still go abroad among one's friends," declared a local dealer. "It will be a tearless onion, too. Its popularity will soon approach that of the strawberry or the watermelon."

September Crop Prospects Are Not Cheerful

Spring Wheat Estimates Put 1916 Harvest Five Hundred Million Bushels Below That of 1915 — Corn Three Hundred Million Bushels Short — Meat Supply Slender — Beet Sugar Is Good, and the Rice Crop Is Heavy

Summary of Crop Reports and Comparisons.

From the Monthly Crop Report published by the Department of Agriculture the following figures are taken, under date of September 1:

The total production of important products this year compared with last year is estimated as follows: Corn, 88.7 per cent; wheat, 60.4 per cent; oats, 79.9 per cent; barley, 77.8 per cent; rye, 85.1 per cent; buckwheat, 100.1 per cent; white potatoes, 88.7 per cent; sweet potatoes, 93.3 per cent; tobacco, 115.4 per cent; flaxseed, 107.6 per cent; rice, 113.4 per cent; hay (all tame), 101.1 per cent; clover hay, 108.8 per cent; sugar beets, 1.17 per cent; cotton, 105.4 per cent; apples, 88.3 per cent; peaches, 58.2 per cent.

The estimated number of stock hogs in the country on September 1 is 3.8 per cent less than a year ago.

The level of prices paid producers of the United States for the principal crops increased about 9.3 per cent during August; in the past eight years the price level decreased about 2.1 per cent during August. On September 1 the index figure of prices was about 21.9 per cent higher than a year ago, 14.3 per cent higher than two years ago, and 18.6 per cent higher than the average of the past eight years on September 1.

The prices of meat animals—hogs, cattle, sheep, and chickens—to producers of the United States increased 0.1 per cent from July 15 to August 15; in the past six years prices increased in like period 1.1 per cent. On August 15 the index figure of prices for these meat animals was about 19.4 per cent higher than a year ago, 5.4 per cent higher than two years ago, and 18.7 per cent higher than the average of the past six years on August 15.

Government Report Shows Great Grain Loss.

The Government's grain report, published by the Department of Agriculture, September 8, indicated a still further reduction in the 1916 harvest prospects. The winter wheat crop has, of course, been made. Chief interest in grain circles now attaches to the promise of corn and spring wheat.

The Department estimates a 2,710,000,000-bushel corn crop, which is a reduction of no less than 67,000,000 from the estimate of a month ago. The 1915 harvest amounted to 3,055,000,000 bushels. The current crop is still above an average, however.

As to spring wheat a further contraction of 43,000,000 bushels was indicated in the present estimate, the Department figuring the yield 156,000,000 bushels, against 199,000,000 bushels as of August 1, and 357,000,000 bushels, the harvest of 1915. Combining the spring wheat estimate with that of winter wheat the 1916 wheat crop promises to be 611,000,000 bushels, as against an estimate of 654,000,000 bushels one month ago and a 1915 actual production of 1,012,000,000 bushels.

Meat Trade Prospects.

With the live stock in the United States standing at less than two-thirds the figures of ten years ago, in proportion to population, and the demand by packers increasing steadily, the outlook is far from satisfactory. We have been importing less than during 1915, but rather because the Argentine and Australian sources are closed to us by British necessities, than by reason of slack demand. Brazil has sent us something like a million pounds of beef a month, about two-thirds of our beef imports, developing a new supply base through the establishment of freezing plants at Sao Paulo. Altogether we have imported 71,000,000 pounds of meat this year and exported 1,355,000,000 pounds.

Prices continue at high record figures, and home consumption has declined on this account. Foreign demand for all canned meats and fish has sustained the market, in fact has given it all the impulse needed to make it confidently aggressive. The need of stimulated production by stock breeders has long been evident; if present prices and conditions show no effect there would appear to be no solution of the problem, so far as increase of the home supply is concerned.

Domestic Beet Sugar Industry Booming.

The 1916-17 beet sugar campaign in the United States is now underway, the Visalia factory at Visalia, California, the first factory to start slicing beets, having commenced operations July 2—a day earlier than its record for last year.

With the domestic beet sugar industry entering into a period of actual production, the interest of the sugar trade now turns to the beet crop prospects for this season. A general survey based on present conditions indicates a substantial increase of about 21 per cent in the total acreage planted in the beet growing states this year, over the acreage harvested in 1915, with the outlook for a much larger yield than the record production of last year.

From special reports received from the beet sugar factories of the country, Facts About Sugar places its provisional estimate of the 1916 sugar beet sowings at 741,202 acres, compared with 611,301 acres harvested in 1915, as reported by the U. S. Department of Agriculture. If not cut down by adverse weather conditions, this will result in an increase of 129,901 acres harvested this year.

The number of beet sugar factories operating this year will total 74, scattered over 15 states, compared with 67 operating in 1915, located in 14 states. The total number of factories in the United States is now 83, as against 78 for the past year. Of the seven additional factories which will operate during the 1916 campaign five are new ones, and two are factories which did not operate last year and have since been moved to new locations. Nine factories will remain closed in 1916, compared with 11 in the previous campaign.

Based on the past five year average out-turn of sugar from the acreage harvested, the beet sugar production for this campaign will exceed 960,000 short tons of sugar, if unfavorable weather conditions do not materially effect the growth and harvesting of the beets planted in the above estimated acreage. Such a production would show a striking increase over the 1915 high water mark of 874,220 short tons.

Canada Reports Big Crops and Values.

A broad and comprehensive view of the Canadian home field is shown in the September commercial letter of the Canadian Bank of Commerce, from which the following paragraphs are extracted:

On the basis of current prices the value of the chief cereal products, wheat, oats and barley, will be 37.6 per cent above the average of the years 1910 to 1915 inclusive. The estimated production of these grains is 567,411,100 bushels, the value of which is \$455,034,403, as compared with an average for the same products in the last six years of \$330,647,633. In the case of other grains, the yield is below the average, but values are much higher.

Fruit growth in Nova Scotia and British Columbia is normal, but lack of rain elsewhere is having serious effects in reducing the yield as well as the quality. The hay crop all over Canada is extraordinarily heavy, and has given a stim-

ulus to dairying at a time when its products are bringing unprecedentedly high prices.

The milling companies, during the twelve months ending with August, their financial year, have done an abnormal business, from which satisfactory profits have been derived. The output was 30 per cent greater than in the previous year, and the greater part was exported.

On the Atlantic coast the catch of all kinds of fish has not been as large as expected, and buyers from the United States and the West Indies are bidding unusually high prices for fish cured and packed to meet their requirements. Prices in general are higher and the net returns will be fully equal to those of last year. It seems now to be almost assured that the salmon pack in British Columbia will be considerably below normal. On the Fraser river at the end of August the pack was estimated at 30,000 cases, as compared with 180,000 last year.

Rice Crop Large in the South.

The first car of the 1916 crop of rice was received in Cincinnati late in August from New Orleans. Owing to the improved methods of planting the rice farmer no longer depends upon rain. Irrigation canals now supply him with all the moisture he needs, and this year he has been rewarded by one of the largest crops in the South's history.

California Lima Bean Crop Bigger.

The lima bean crop is turning out much better than had been predicted a few weeks ago. According to present estimates the crop will be in excess of that harvested last year. The crop of 1915 reached 1,700,000 sacks of 80 pounds each.

Cape Cod Cranberries Abundant.

It is estimated by the wholesalers that the total production of cranberries on Cape Cod this year will be about 260,000 barrels. This is a gain of 20,000 barrels over last year's crop of 240,000 barrels, and far from being a bumper crop as the production of cranberries in 1914 was 450,000 barrels. Shipment began with small lots early in September.

APPLE FORECAST OF PRODUCTION.

The September 1 forecast of total apple production this year in the United States, as reported by the Bureau of Crop Estimates, U. S. Department of Agriculture, is 67,679,000 barrels of 3 bushels each (agricultural and not commercial basis), as compared with 76,670,000 estimated produced last year, of which not quite 65 per cent were sold. In the past ten years estimated production has exceeded the present forecast five times. Taking the country as a whole, thus appears that the apple crop will be nearly an average, but 12 per cent smaller than last year's large crop. The crop is larger than last year in the Atlantic Coast states, including New York and Pennsylvania, and in the Pacific Coast states, but smaller in practically all the interior states except Michigan, which has about 34 per cent more than last year.

Baldwin appears to be the leading crop this year, with a forecast of 9,302,000 barrels, an increase of 12 per cent over last year's production. New York forecast is 3,841,000 barrels, an increase of 42 per cent over the estimated production last year.

Ben Davis, which was the leading variety as to quantity last year, falls to second this year, with a forecast production of 9,245,000 barrels, which is 17 per cent less than the production estimated last year. In Missouri, which leads in the production of this variety, the present forecast is 1,060,000 barrels, a decrease of 41 per cent from last year.

The Winesap forecasts a production of 3,794,000 barrels, a decrease of 32 per cent from last year. The Virginia forecast is 911,000 barrels, a decrease of 27 per cent.

Greening forecast is 3,739,000 barrels, an increase of 4 per cent over the estimated production last year.

Northern Spy forecast is 3,602,000 barrels, an increase of 25 per cent over last year's estimated production.

The Wealthy forecasts a production of 2,863,000 barrels, a decrease of 13 per cent from last year's crop.

The Rome Beauty, with a forecast of 2,770,000 barrels, is 21 per cent short of last year's estimated production.

The Jonathan variety forecasts a production of only 2,432,000 barrels, which is a reduction of 46 per cent from the estimated crop of last year—and this notwithstanding a material increase in the Pacific northwest.

The York Imperial forecasts a production of 2,403,000 barrels, which is 2 per cent less than last year's estimated production.

Grimes Golden forecasts a production of 2,050,000 barrels, a reduction of 30 per cent from last year's crop.

Oldenburg variety forecasts a production of 2,001,000 barrels, which is 8 per cent less than last year.

Stayman Winesap forecasts a production of 1,380,000 barrels, a reduction of 22 per cent from last year's crop.

Limbertwig forecasts a production of 1,318,000 barrels, a reduction of 13 per cent from last year's crop.

The Yellow Newtown (Pippin) forecasts a production of 1,277,000 barrels, which is 4 per cent less than last year's crop.

Tompkins King forecasts a production of 1,174,000 barrels, an increase of 20 per cent over last year.

Wagener forecasts a production of 1,020,000 barrels, an increase of 24 per cent over last year.

McIntosh forecasts a production of 1,012,000 barrels, an increase of 31 per cent over last year.

Fameuse (Snow) forecasts a production of 1,005,000 barrels, an increase of 1 per cent.

Of the other varieties, Golden Russet forecasts a production of 1,002,000, an increase of 14 per cent over last year; Yellow Bellflower 766,000 barrels, a decrease of 18 per cent; Gravenstein 738,000, an increase of 10 per cent; all other varieties, unclassified, 11,516,000 barrels, a decrease of 15 per cent.

CORNER-STONE LAYING OF CHICAGO PLANT.

The largest single unit modern cold storage plant in the world, now being erected by the Central Cold Storage Company of Chicago, is to have a corner-stone laying on October 9, which is Chicago Day, commemorating the great fire of 1871. The plant is located on the identical spot (corner Dearborn avenue and Kinzie street) which was occupied by buildings erected immediately after the great fire. The land has changed hands only twice since it was deeded from the government to Kinzie, a fur trader, and is a part of his old farm. The services in connection with the laying of the cornerstone will be at 12 m., October 9, and everyone is invited, but particularly the produce and refrigerating industries.

August Oleo Output at Chicago.

The oleomargarine output for the Chicago district for the month of August, 1916, was 7,410,780 pounds uncolored and 213,810 pounds colored, a total of 7,624,590 pounds. This was over a million and a half pounds more than the preceding month. Compared to a year ago, it was a million and a quarter pounds more. Production of renovated butter in Chicago in August totaled 860,799 pounds, compared to 586,440 pounds in July.

Oleomargarine production in the Chicago district by months for the past year is as follows:

	Pounds.
August, 1915	6,379,572
September	6,862,642
October	8,417,380
November	8,025,175
December	8,914,978
January, 1916	8,132,537
February	8,629,735
March	10,159,141
April	9,741,393
May	9,093,366
June	7,895,272
July	6,070,926
August	7,624,590

Why Maize Is Monarch of American Cereals

Corn Brings the Farmers of This Country Nearly Two Billion Dollars a Year and as Food for Man and Beast and a Factor in Manufactured Products It Doubles That Value Before It Is Consumed

CORN is such a commonplace, ordinary sort of thing that perhaps few realize just how important is the role it plays in the economic well-being of the United States. Some of the more striking facts, as brought out in an article by Edward Albes in the *Bulletin of the Pan-American Union*, Washington, D. C., may surprise some of them. For instance, the United States produces three-fourths of the entire corn crop of the world. In 1915 the country's production amounted to 3,054,536,000 bushels, having a farm value of \$1,755,860,000. When it is stated, moreover, that if we add the value of the record-breaking wheat crop of 1915, amounting to \$930,302,000, to the value of the big cotton crop of the same year, amounting to \$602,393,000, the sum of the two still lacks \$223,165,000 of reaching the value of the humble corn crop, some idea of the importance of the last named may be had.

The history of the great cereal is dealt with by the writer of the article, as well as its manifold uses as a food for man and beast, as a beverage, and as an important factor in many kinds of manufactured products. Relative to its origin, the writer introduces the subject by brief disquisition anent man's teeth, which show that he is both carnivorous and granivorous.

Rub off the thin—mostly very thin—veneer of civilization, and man will prove to be about the same animal that he was in his primitive environment. His elemental nature has undergone but little change. Doubtless his brain has been developed and his mental machinery somewhat improved, but his complicated physical structure is but little altered. To keep that physical structure in good repair and to keep the entire human machine in a high state of efficiency, man has found that he needs a variety of food. As a consequence he has, from time to time, discovered new things that are "good to eat," things that contain the chemical elements in one form or another that he needs to replace the tissues of nerve, muscle, bone, and fat—the brain and brawn—that are wasted during his day of activity. Meat contains some of these elements, as do nuts and fruits, but the greatest foods—those upon which the greatest number of us depend—are the grains, and the greatest of all the grains, the one most recently made known to what we are pleased to call the "civilized" world, is the one given to it by the Americans, viz., Indian corn, better known beyond the confines of the United States by the name of "maize," the spelling of the word varying somewhat in the several languages into which it has been incorporated.

That maize was unknown to European, Asiatic, and African peoples before the discovery of America is now well established. Aside from the testimony of Humboldt, Darwin, and others, the matter of the origin of maize was finally settled by the celebrated Swiss botanist, Alphonse de Condolle, who, after sifting all the evidence, makes the statement in the revised 1882 edition of his "Origin of Cultivated Plants" that "Maize is of American origin, and has only been introduced into the Old World since the discovery of the New."

Just where in the Americas it originated is a mooted question. According to Condolle, at the time of the discovery of the new continent, maize was one of the staples of its agriculture, from the La Plata valley to the United States. The natives planted it around their temporary dwellings where they did not form a fixed population. The burial mounds of the natives of North America, who preceded those of our day, the tombs of the Incas—the catacombs of Peru—contain ears or grains of maize, just as the

monuments of ancient Egypt contain grains of barley, wheat and millet seed. In Mexico a goddess who bore a name derived from that of maize corresponded to the Ceres of the Greeks, and the first fruits of the maize harvest were offered to her. At Cuzco the virgins of the sun offered sacrifices of bread made from the meal of Indian corn. Nothing is better calculated to show the antiquity and generality of the cultivation of a plant than this intimate connection with the religious rites of the ancient inhabitants.

It was not only in Peru and Mexico, however, that maize was extensively cultivated. It was the great food plant of practically all the American Indians who sought the aid of cultivation in obtaining food. Columbus found it to be the principal food of the natives of the island of Santo Domingo, and his was the first account of the grain made public in Europe. Linguistic evidence shows that it was introduced into the United States from the tribes of Mexico and from the Caribs of the West Indies, but the time of this introduction can only be conjectured. That it was long before the appearance of the Europeans is evident not only from its early and widespread cultivation by tribes of the area now embraced in the United States, but from the fact that indications of its cultivation are found in mounds and in the ancient pueblo ruins and cliff dwellings; while corroborative evidence is found in the fact that several varieties had already been developed at the time of the discovery, four being mentioned as in use among the Indians of Virginia.

Dairy Day Celebration at Litchfield, Ill.

What is intended to be the largest single dairy day celebration ever held in the country will take place at Litchfield, Ill., Saturday, October 7. Among the speakers will be the Hon. Carl Vrooman, Hon. Charles W. Fairbanks, Hon. Ollie James, Governor Dunne, and Hon. Frank O. Lowden. Ten bands, three quartets of singers, and an old-fashioned barbecue are among the entertainment features of the occasion. At least 40,000 people are expected to be in attendance.

Omaha Pure Food Show.

Omaha will hold a pure food show from October 9 to 14, under the auspices of the Omaha World-Herald. There will be fifty food exhibits, about half of them Omaha products, and the rest from outside.

National Dairy Show.

The National Dairy Show will be held at Springfield, Mass., October 12 to 21, inclusive.

Pure Food Show in San Francisco.

San Francisco will hold a big pure food exposition in the million-dollar civic auditorium, October 14 to 26, inclusive.

Philadelphia Pure Food Show.

Horticultural Hall in Philadelphia will be the scene of a big pure food show, beginning October 23 and continuing two weeks. H. P. Cassidy will be in charge, and the Wholesale Grocers' Association and the Stewards' Club will give co-operative aid.

Kansas City Live Stock Show.

The American Royal Live Stock Show will be held at Kansas City, Mo., October 2 to 7. The premiums offered amount to \$4,000.

Patents and Copyrights

The following patents of interest to readers of this journal recently were issued from the United States Patent Office. Copies thereof can be obtained from R. E. Burnham, patent and trade-mark attorney, 882 Bond Building, Washington, D. C., at the rate of 20 cents each. State number of patent and name of inventor when ordering.

1,195,176. Process of pickling and curing hams and other meats. Alonzo N. Benn, Chicago, Ill.

1,195,437. Candy-making machinery. Samuel H. Born, San Francisco, Cal., assignor to Morris Mercantile Co., same place.

1,195,510. Baker's peel. Henry L. Schroeder, Chicago, Ill.

1,195,511. Baker's peel. Henry L. Schroeder, Chicago, Ill.

1,195,672. Intermittent drive for sweetmeat-wrapping machines. Frederick Grover, Leeds, England, assignor to The Forgrove Machinery Company, Limited, same place.

1,195,848. Fruit-cleaning device. Charles Oakford, Plant City, Fla.

1,195,854. Fruit-cleaning machine. Edward Rawson, Portland, Ore.

1,195,969. Dough-molding machine. Jacob and Max Brodsky, Chicago, Ill.

1,196,068. Machine for coating biscuits and other articles with icing or similar substances. George S. and George R. Baker, London, England.

1,196,147. Machine for baking wafers and the like. William E. Prescott, London, England, assignor to Joseph Baker & Sons, Limited, same place.

1,196,174. Batter-making machine. Carl R. Taylor, Cleveland, Ohio, assignor to The Cream Cone Machine Co., same place.

1,196,563. Corn-popping machine. Charles E. McCarren, Cincinnati, Ohio, assignor to Samuel S. Kingery, Norwood, Ohio.

1,196,621. Apparatus for making grape-juice. Solomon Weinberg, Philadelphia, Pa., assignor of one-half to Oscar Rosenbaum, same place.

1,196,865. Machine for molding chocolate paste. Paul G. Hollstein, Carlstadt, N. J., assignor to J. M. Lehmann Co., New York, N. Y.

1,196,906. Combined churn and butter-worker. Leonard Virtue, Owatonna, Minn.

1,196,975. Fruit-grading machine. Franklin B. Pease, Rochester, N. Y.

1,196,982. Egg-crate. John D. Ripson, Rochester, N. Y.

1,197,027. Bean-sorting machine. Howard M. Hoel and Frank Kiene, Frazee, Minn.

1,197,270. Method of preserving milk. John W. Davis, Boston, Mass.

1,197,297. Manufacture of shredded-cereal biscuit. John L. Kellogg, Battle Creek, Mich., assignor to Kellogg Toasted Corn Flake Co., same place.

1,197,321. Automatic guard control for dough-mixers. Charles Willersdorf, Paterson, N. J.

1,197,335. Egg-tester. Edward J. and Emery T. Boehm, Neenah, Wis.

1,197,369. Fruit-grader. Foster J. Heacock, Salem, Ind.

1,197,442. Preserving fruit-juices. Charles E. Burke, Berkeley, and Donald E. Fogg, Oakland, Cal.

1,197,697. Fruit-grader. Commodore P. Weller, Clifton, Colo.

1,197,707. Method of preserving eggs. Arthur N. Bennett, Chicago, Ill., assignor to Sterilized Egg Co., same place.

1,197,996. Egg packing and testing device. Alek L. Anderson and William V. Purdy, Beatrice, Neb.

1,198,174. Process for preserving meats. Frederick A. Waldron, Plainfield, N. J.

1,198,304. Rice food. Tom J. Sugimoto, San Francisco, Cal.

1,198,393. Manufacture of beverage extracts. John L.

Kellogg, Battle Creek, Mich., assignor to Kellogg Toasted Corn Flake Co., same place.

1,198,477. Combination egg-testing machine. John F. Pfeifle, Youngstown, Ohio.

1,198,792. Egg-case. Raymond R. Tracy, Morrison, Ill.

1,198,798. Candy-casting machine. John Werner, Rochester, N. Y.

1,198,872. Box for citrus fruits. Henry C. Schrader, Jacksonville, Fla.

October 14 Will Be Candy Day.

Candy Day, October 14, will be observed generally by the confectioners of the country. Live manufacturers and jobbers are working out plans to co-operate with the retailers, and this inception of what is expected to become an annual event of importance will undoubtedly mark an important step forward in the trade.

For the Farms of New England.

Land under cultivation in New England shrank 52 per cent in the fifty years from 1860 to 1910, but the wage-earning population increased 350 per cent in the same period. As a consequence a day's wages in the six states—three states of great manufacturing output—has less purchasing power in food stuffs than in other communities more closely surrounded by agricultural producing regions.

This is a serious condition, and the Eastern States Agricultural and Industrial Exposition has put the questions connected with it before a special committee for investigation and suggested action. Theodore N. Vail of Vermont, E. Bertram Pike of New Hampshire, William T. Guptill of Maine, Wilson H. Lee of Connecticut, R. Livingstone Beeckman of Rhode Island, and Nathaniel I. Bowditch of Massachusetts make up the committee, and their quest in the matter will unquestionably lead to definite results of advantage alike to producers and consumers.

Canned Fifteen Carloads of Peaches in a Day.

A new canning record was established recently at the plant of Libby, McNeill & Libby, at Selma, Cal., when 9213 boxes of peaches, or more than fifteen carloads, were received and canned in one day.

California Clawless Lobsters.

Just at the time that lobster prices are dropping in the east word comes here that California is expecting to furnish lobsters to the eastern markets. On the west coast the crustacean is known as crawfish, though in size and make-up it does not in any way resemble the crawfish so popular in St. Louis and other Mississippi River cities. The Pacific coast crawfish is in reality a lobster minus the claws. How it will take here in the east will not be known until samples have been received. The western stock can be sold, boiled, at 25 cents per pound.

Cereal Breakfast Food Industry.

Guy E. Youngburg, assistant chemist at the South Dakota College of Agriculture, has made analyses of the different kinds of breakfast foods on the market. He says that the use of corn and oatmeal as breakfast preparations led the way about twenty years ago to the beginning of what has proved to be a well-developed cereal breakfast food industry. During these twenty years or so almost a multitude of breakfast foods have been put on the market.

Many of them have their merits, others had not, and consequently they have fallen by the wayside. New processes have been discovered and efficiency in manufacture brought about so that at the present time a breakfast food that stays on the market for any length of time must have exceptional merits. Of the brands on the market ten years ago there are now but three or four. The others have given way to better ones and perhaps several have only become tired of their names and changed them. There are now some 35 brands on the market, all sold in sealed, sanitary packages.

THE WHOLESALE GROCERY FIELD

ALL THE MANUFACTURING AND JOBBING NEWS WORTH PRINTING

American Pretzel Company of Philadelphia has bought out the Columbia Pretzel and Baking Company of St. Louis and the Pfenninger Pretzel and Baking Company of the same city. The Cincinnati plant of the Columbia Pretzel and Baking Company had been taken over by the American prior to this latest purchase. The plants will be operated by the new owner.

Standard Foods Company, Chicago, capital \$10,000, has been incorporated by Leo J. Kramer, Dominick Proto, and Pisani J. Hylander.

Chocolate Refiners, Inc., is a new company organized in Boston, which has taken over the factory at Mansfield, Mass., owned by the Walter M. Lowney Company, and the chocolate manufacturing plant of the United Drug Company. The new company will manufacture and supply to the Lowney company and the United Drug Company all of their requirements in chocolate coatings and cocoa, but the trademarks and formulas of those companies remain their own property while the new company uses the formulas in manufacturing the goods on the old standards and for the old brands.

Utah-Idaho Sugar Company is operating eleven beet sugar factories this season, located at Lehi, Garland, Payson, Elsinore, Sugar City, Idaho Falls, Blackfoot, Spanish Fork, West Jordan, Brigham City, and Grants Pass. The four last-named plants were completed this year at an aggregate cost of nearly \$3,000,000. A twelfth plant will be added for next season's work, at Fallon, Nevada.

Chattanooga Cereal Company has been incorporated at Chattanooga, Tenn., by W. D. Preston, J. C. Askew, W. A. Overall, O. N. Bryan, and W. H. Cummings. The food manufactured by the company is said to include in its composition wheat, barley, oats and rye.

Golden Grain Cereal Company is a new concern in Nashville, Tenn. The breakfast food produced is said to go through twenty-eight processes before it is ready for market, and in all this manipulation it is not touched by the hands of the operatives.

William Laesch Company of Miami, Fla., is putting in equipment to manufacture guava jelly.

Phs. van Ommeren, the century-old house of Rotterdam, Holland, has added a New York branch to its list of foreign offices, which includes houses of the firm in Antwerp, Amsterdam, and London. William H. Scholz is the manager of the New York house, and is amply qualified through long residence in foreign shipping centers. During the past two years Mr. Scholz was commercial adviser of the American Legation at The Hague. The Ph. van Ommeren Corporation of New York, international shippers and forwarders, have their offices at 42 Broadway.

Postum Cereal Company, Battle Creek, Mich., is adding a new five-story fireproof building to its manufacturing plant.

Borden Condensed Milk Company has fixed on Modesto, the county seat of Stanislaus county, as the location for its first plant in California. The factory will cost \$100,000 and at the outset give employment to 100 people.

H. J. Heinz of Pittsburgh, Pa., president of the H. J. Heinz Company, also chairman of the World's Sunday School Association, on his recent western trip visited Denver and made an address at one of the churches. Mr. Heinz contradicts the rumor that his company was about to build a manufacturing plant in the Colorado capital.

The Marquette Baking Company is a new corporation in St. Louis, formed by John Bohnenkamp, J. R. Thieme, and Barbara Thieme, with a capital stock of \$10,000.

Northern Sugar Corporation, organized at Mason City, Iowa, is putting up a beet sugar factory with a capacity of 1,000 tons of beets a day. It is intended to be completed and equipped to handle the 1917 crop. Earl C. Moore, formerly with the Iowa Sugar Company at Waverly, is general manager.

Earl O. Snyder of Columbus, Ohio, formerly president of the Ohio Retail Grocers' and Meat Dealers' Association, has been made assistant sales manager of the Kellogg Toasted Corn Flake Company.

Vincent Lambert Tissera, said to be the first native of Ceylon to become a citizen of this country, died recently at his home in Chicago. He promoted the importation of Ceylon tea into the United States after coming to the world's fair in 1893 as an assistant commissioner for Ceylon, became an importer, and built up a reputation as a lecturer on his mother country, India. He is credited with aiding the trade relations between Ceylon and the United States.

Isaac E. Tone, member of the firm of Tone Bros., coffee roasters and spice grinders of Des Moines, Iowa, died at his home in that city early in September. Mr. Tone started in business in Des Moines in 1873, and the firm was incorporated in 1879. Gerhard Tone died sixteen years ago. The firm had built up the largest business of its kind in the state.

Albert Sunter died at his home in Berkeley, Cal., last month, aged 76. Mr. Sunter was a native of New York, but crossed the plains to the Pacific Coast in 1851, and a few years later went to the Hawaiian Islands, where he became a pioneer in the coffee and sugar industry. For forty years he was prominent as a producer and a promoter of trade.

Employees of Wilson & Company of Chicago were entertained on Labor Day by Thomas E. Wilson, president of the company, at his farm, "Edellyn," near Lake Forest. Motion pictures were taken of the day's events, which included athletic contests and an old-fashioned barbecue with whole roasted beeves. A horse show featuring Mr. Wilson's famous prize stallions was one of the attractions of the day. Another was a trap shooting contest in which the host played a prominent part.

At present there are only fifteen cheese plants in Iowa, while Wisconsin has several hundred. Iowa jobbers have been urging the state dairy and food department to take steps to encourage the building of cheese plants in the state. The jobbers say that Iowa can make as good cheese as Wisconsin, and that they prefer to sell Iowa products.

The Miller-Elmer Co. of New Orleans secured a large contract from the government to supply the army commissaries along the Mexican border with candy for the troops. It is estimated that the contract amounted to about 100,000 pounds during the three months of its duration.

The John R. Daily Company has started work on the construction of a packing plant at Missoula, Mont., to cost \$40,000. The plant will be of brick and concrete, 100x60 feet, and a basement containing 17,500 square feet of space, where a cold storage plant will be installed. Slaughtering will be done in the present plant of the company, which will be remodeled and enlarged; improvements to be completed by December 1.

The Diamond Match Company will shortly begin the construction of a \$250,000 addition to its match factory in Chico, Butte County, California. The additions will represent an expenditure of \$150,000, while \$100,000 will be expended for new match manufacturing machines. As soon as the work is completed the company will employ 125 additional employees.

One of the largest walnut packing and cleaning establishments in the world is soon to be placed in operation in California, where 20,000,000 pounds of walnuts are produced each year.

The Bio-Chemical Laboratories Company of Elyria, Ohio, has been incorporated with a capital of \$10,000. The incorporators are Harry Goldberger, B. O. Collins, Lee Stroup, F. L. Hammel and L. B. Faurer.

A packing plant to cost about \$300,000 is to be established in a short time by the Moran Packing Company of San Francisco, Cal. This plant will be located on Seventy-third avenue, near the Southern Pacific tracks in East Oakland, Cal.

The Hygienic Dairy Company of Watertown, N. Y., has been incorporated with a capital of \$25,000, the principal purpose being to pasteurize milk and deal in dairy products. Another year the company hopes to manufacture ice cream and probably do a general cold storage business. It is hoped to have things in shape so that business will be commenced by September 1.

The American Can Company has awarded a contract for the erection in Seattle of a five-story reinforced concrete factory to be completed by January, 1917. The plant, including equipment, and site will represent an expenditure of more than \$1,000,000.

John L. Meyer of the advertising and sales departments of the Kellogg Toasted Corn Flake Company for the past four years has resigned to go into business in Milwaukee, his former home, but he will not leave Battle Creek until later in the year.

Tea Arrivals in August.

Returns from the tea examiners of the custom houses in Boston, Chicago, Honolulu, New York, Puget Sound, St. Paul and San Francisco show that during the month of August, 1916, there were received and passed 12,836,294 pounds of tea. Only 808 pounds were rejected, and this small amount for defective quality rather than for coloring or facing. Nearly one-half the tea was of Japan home production, and to this may be added more than three million pounds of Formosa Oolong. Of India and Ceylon varieties there were a considerably more than two million pounds, while of Canton teas and orange pekoe the total was but 65,000 pounds.

Eggs and Cheese in Cold Storage.

The report of the Office of Markets and Rural Organization of the Department of Agriculture, dated September 11, showed:

Incomplete returns gave 4,761,632 cases of eggs in cold storage. Of the 221 firms reporting, 185 firms gave their present stock as 4,590,688 cases, as compared with 5,682,950 cases last year, a decrease of 19 per cent.

Reports from 152 firms gave 30,437,771 pounds of American cheese in storage. Comparative figures from 119 firms showed a decrease this year in stocks of about 3 per cent.

New California Walnuts Higher.

California Walnut Growers' Association on September 20 announced its opening prices for the new crop, ranging from 12.50 for No. 2 soft shell to 19.00 for budded. These prices are guaranteed against decline for eleven months, but are likely to be advanced before the season is well under way. The figures given are about 2 cents higher than last year's prices, and the crop, estimated at 12,000 tons, is 20 per cent less than the boom crop of 1915.

Sugar Prices for Three Years.

The wholesale price per pound of granulated sugar during the first week in August, 1913, 1915, and 1916 was, respectively, 4.75, 5.60, and 7.50 cents for New York; 4.60, 5.80, and 7.65 for New Orleans; and 4.90, 5.90, and 7.85 for San Francisco.

Increasing the Demand for Raisins.

The Associated Raisin Company has compiled some interesting figures to show the increase in the consumption of raisins due to the systematic efforts of the company to educate the public. A new field, which it was decided to develop in 1914, was that of raisin bread and in that year 760 tons of seeded Muscats were sold to bakers throughout the country. In 1915 the sales increased to 8,000 tons. In July, 1916, the sales aggregated 144,000 25-pound boxes against 18,000 in July, 1915, while in August, 1916, the total of such sales had jumped to 235,000 boxes.

Increased Salt Production.

The marketed production of salt in 1915 in the United States, including Hawaii and Porto Rico, was 38,231,496 barrels, or 5,352,409 short tons, valued at \$11,747,686, an increase of 3,426,813 barrels or 479,753 short tons in quantity and of \$1,550,269 in value as compared with 1914. The increase in quantity was 9.8 per cent and in value 15.2 per cent.

The average price of salt in 1915 was 31 cents per barrel or \$2.19 per ton, as compared with 29 cents per barrel or \$2.09 per ton in 1914. During the last 5 years the price of salt and the quantity marketed have been slowly increasing.

In 1915 the United States produced 99.2 per cent of the salt it used, and it could easily supply 100 per cent, as the present capacity of both mines and manufacturing plants is considerably greater than the present output. Many plants that have in recent years worked at a fraction of their capacity or have been entirely shut down could easily resume operations should the demand increase.

Porto Rico Wants American Market for Coffee.

In the year ended June 30, 1916, Porto Rico exported 31,634,975 pounds of coffee, valued at \$4,976,288 to foreign countries, and 509,158 pounds, valued at \$77,965, to the United States. Cuba purchased 18,521,991 pounds for \$2,739,549; Spain, 7,454,410 pounds, valued at \$1,242,715. Italy, France and Sweden were the next largest buyers.

Coffee men assert the industry is languishing, chiefly because the island cannot sell its coffee in Cuba and Spain, its two best markets, as favorably now as during the Spanish regime, when concessions were made to products from the Spanish colonies, and also because a satisfactory American market has not been developed. Business associations in the

island have joined in an effort to promote the interests of Porto Rico coffee in the United States.

Americans Furnish Good Market for Macaroni.

Macaroni and vermicelli manufacturers in the United States operated 395 establishments in 1914, and the value of their products in these lines amounted to \$13,284,302. The number of persons engaged, including proprietors, salaried employes, and wage-earners, was 4,665. These figures are from a summarized report just issued by the Department of Commerce, Bureau of the Census.

Canada Drained of Eggs.

Canada is suffering from an unusually high price for eggs and a manifest scarcity such as has never been known before, which is likely to continue till next spring. In some measure it appears to be due to the tremendous demands upon Canada from Europe on account of the war, but the same unusual domestic demand that was noted in the United States appears to have operated in Canada.

Russia, Great Britain and Germany are chiefly concerned in the creation of the egg shortage apparent on the Canadian market. Russia, because her immense egg exports to Britain are cut off by the embargo—an embargo partly due, it is believed, to a falling off in Russian production—Great Britain, because of the great and growing demands for eggs on the 'Old Country' markets—Germany, for the Russian embargo, shortage of shipping on the North Sea and associated difficulties of the supply trade.

But there is a further reason why Germany has a real share in the responsibility for the egg shortages of Russia, Great Britain and Canada. Germany long before the war had begun to extend tenacious trade tentacles into the rich territory of Russian production of foodstuffs. German agents traversed the Russian farming districts, and German capital financed great systems of collection and cold storage of farm produce, principally eggs, butter and cheese. Immense cold storage plants were erected at suitable strategic points for trade control.

At Riga, for instance, one of the greatest cold storage plants in the world was erected by German enterprise and financed by German capital for the collection and holding of Russian farm products. The war ravaged the farm lands westwards and southwards of Riga, and raged around Riga itself. The opinion of those most likely to know is that there has not been a Russian egg in that huge cold storage plant for many a long day.

Lobsters from Prince Edward Island.

Prince Edward Island exports of canned lobster to the United States amounted to 351,044 pounds during the second quarter of 1916, valued at \$115,957, compared with 170,303 pounds worth \$55,575 during the same period in 1915.

The lobster packed for the season ended June 30 was 10 per cent larger than last year. Prices for lobsters at the canneries ranged 30 per cent higher.

There are 4,000 persons in Prince Edward Island engaged in the lobster industry, and lobster canning represents 75 per cent of the total fisheries of the island.

Pacific Fish in Atlantic Waters.

As a result of transplanting, the Atlantic shad and striped bass are abundant on the Pacific coast and the former are being shipped back in large numbers to supply the markets of the east. Certain depleted salmon rivers of Maine recently have been planted with humpbacked salmon from the Pacific coast and small runs of breeding fish already have appeared in several of these streams, indicating that the nearly exterminated Atlantic salmon may be replaced by a worthy successor, better able to cope with the new conditions in the streams incident to industrial development.

Indianapolis, Ind., will hold a big food show October 16 to 21. Phil G. Kerz, president of the Kerz Grocery Company, will be in charge.

Markets of the Month

Food Staples—Movements and Conditions—Indications of the Future.

Sugar.

After some fluctuation in prices, with an advancing scale for raw supplies and the withdrawal from the market of several of the big refining companies, the sugar situation seems to be clearing, with indications of sound and steady trading. Cane refined was quoted as low as 6.25, but quickly recovered to 6.40, then moved up to a 6.75@7.00 basis. Buying was only for immediate demands.

The beet sugar crop, now well under way in harvesting, promises well, and it is possible that the output will reach or even exceed last year's yield. It is coming into market gradually, for though beet harvesting began in July in California, it will continue till late in December, and another month will go by before the supply of beet sugar reaches eastern markets generally.

Interior markets are now at low ebb and an increasing demand is looked for. Unforeseen circumstances may cause another period of market weakness, but it is not anticipated by optimistic observers.

Coffee.

Trade in the coffee market has been fairly active during the past three weeks, prices having declined approximately 1 cent to 1¼ cents a pound, owing to excess of tonnage from Brazil caused by lower freight rates. The weakness has been overcome to a large extent, however, by liberal purchases. Most jobbers and roasters were glad to take advantage of the reduction and replenish depleted stocks.

The ocean freight rate situation has been pretty well cleared up, and as a consequence rates are higher and the coffee market is again advancing. Estimates of the present crop, now being marketed, are constantly being reduced by reports from reliable sources. While it would seem that no particular damage was done by frost to the flowering of the coming crop, continued lack of rain in many sections makes it seem certain that no more than an average crop can be expected. We are experiencing a series of moderate crops, below the requirements of consumption.

Brazil is financially better off than ever before. Planters and commission men both have plenty of money, and realizing that the European war must terminate some time, rest easily in the knowledge that the market must go still higher with a greatly increased consumption in the countries that have not recently been coffee users. They are inclined to hold as much as possible.

Taking into consideration the fact that consumption requirements are as great or greater than production, we cannot consistently feel otherwise than that the present basis for coffee is an economic one.

Tea.

The Japan crop is all picked and in the hands of exporters and the Japanese market is practically closed. The market here, for all grades, is quiet, but prices are held fairly firm and steady. With the stocks all in it is now simply a question of distribution. Basket-fired Japan teas are in light supply, but pan-fired stocks are normal. Seven million pounds of Japan teas came in last month through Seattle, only one port.

There are no features of particular interest in the China, India and Ceylon tea situation. The market is quiet and steady.

Dried Fruit.

Trade is good and the feeling decidedly strong. Prunes declined ½ cent from the high mark, but recovered with very light buying, and the market is strong. The Oregon prune crop is now set down at 28 to 30 million pounds, which is from 5 to 7 million less than the early estimates. There has been a little more interest in the peach situation, with some business at full prices. Some talk of an advance is heard.

At present figures dried peaches should command the attention of housekeepers and providers generally, for they are the cheapest item in the line of foodstuffs. It is surprising that the demand is not larger. Apricots are strong, with an advancing tendency. Raisins show no change, though there is some inquiry for seedless varieties that at present are not obtainable. Currants opened in the market at 33½ per cent above last year's prices and have advanced 2½ cents a pound since the opening. The surprising feature of the general dried fruit situation, judging from this market, is that prices are sustained with such strength on so little trading. This is particularly true of the largest markets, though it is reported that the smaller markets have seen much more free trading.

Canned Foods

The situation is much stronger in canned foods than in dried fruits, even. There is hardly an item in the line in which canners are making full deliveries on contracts. Deliveries vary from 25 to 80 per cent of contracted quantities. The only item in the line of vegetables that comes anywhere near up to normal figures is peas. Consumption is extremely heavy. There is nothing in sight at present that would indicate anything but a steady market. Before a new pack can come in it seems likely that several items will be practically unobtainable.

SECOND NATIONAL EXPOSITION OF CHEMICAL INDUSTRIES.

The First National Exposition of Chemical Industries, held at the Grand Central Palace, New York City, September 20 to 25, 1915, was a distinctly notable event in the evolution of American industrial life. Expositions of this branch in other countries have been of the greatest value in developing a solidarity of interests among chemical manufacturers, in bringing them more closely in touch with producers of raw materials, with novel devices and perfected methods, with designers of improved mechanical accessories, and finally with the consumers of finished products. Such occasions have been stimulating, suggestive, and inspiring; showing where national resources have been neglected, where the needs of domestic consumption have been overlooked or only inadequately met, and, on the other hand, where difficulties and obstacles, physical, technical, or commercial, have been vanquished by the intelligent application of scientific fact and theory, or by the happy combination of pluck, daring, and skillful adaptation.

This first gathering of our country's technical chemists for a comprehensive presentation of their achievements in meeting the nation's demands for an enormous variety of products, that fall ordinarily into the category of chemicals, was unquestionably highly educative. It showed marvelous accomplishment in certain fields; in others it revealed a lack of enterprise in utilizing effectively and fully the magnificent treasures of our mines, forests, fields, and streams.

The Second National Exposition, held at the same place during the week beginning September 25, promised to be equally noteworthy. The number of exhibitors was tripled. Over 50,000 visited the exposition of 1915. An attendance ranging from 100,000 to 200,000 was confidently expected this year.

SOUTHERN RESOURCES BY CHEMISTS.

In its issue of September 14, the *Manufacturers' Record*, of Baltimore, Md., presented a remarkable symposium on "The Chemical Potentialities of the South," to which many of the foremost scientists of the country contributed. The undeveloped resources of the Southern states are barely indicated in the statement that here lies more than half the iron ore of national possession, more coal than the demands of our manufacturing industries will require for thousands of years, and lime, salt, sulphur, and bauxite in inexhaustible quantities. What the adequate development of these resources means to the nation is shown in this series of articles, all of which are written in the spirit of scientific demon-

stration. The *Manufacturers' Record* is a great and very useful weekly publication, all the time, but in this number it has surpassed all former efforts. It is a scientific number, but it is prepared for the general reader, and the facts presented are fascinating as well as impressive.

Lectures on Practical Chemistry of Food Industries.

The School of Practical Arts of Teachers' College, Columbia University, New York City, announces a special evening course of twelve lectures on Practical Chemistry of Food Industries. The lectures will be introductory and are primarily for men and women who are actively engaged in the manufacture or sale of food products. The object of the course is to give the intelligent understanding of the composition and properties of foods, which is so necessary for the solution of many practical problems that arise in connection with food manufacturing.

A large part of the course will be devoted to a consideration of the general principles which affect every food industry. A number of prominent industries will be discussed in detail.

The course will be illustrated by charts, lantern slides, and practical chemical experiments. Numerous samples will be shown. These will illustrate the successive stages in the manufacture of various foods and the different commercial grades of each.

October 24 is the date of the opening lecture, and the fee for the course is \$10. Washington Platt, the instructor, is the food chemist in charge of the experiment station of the National Biscuit Company, New York.

Foreign-Trade Course at Philadelphia.

A foreign-trade course for the season of 1916-17 is to be given by the Philadelphia School of Commerce and Accounts at the Central Y. M. C. A., 1421 Arch street, Philadelphia, Pa., in co-operation with the Foreign Trade Committee of the Philadelphia Chamber of Commerce. The enterprise was inaugurated in the spring at the suggestion of the Chamber of Commerce, and the initial term began in March, ending in June, 1916, with a registration of 75 men and women. The first term of the new year is to begin October 2, when another beginners' course is planned, and advanced instructions will also be given. The second term will begin January 29, 1917.

Provision is made for regular classroom instruction, with illustrations, quizzes, discussions and textbook study. Each of the two evenings a week that are devoted to this course is divided between foreign-trade topics and languages.

First Argentine Wheat for U. S.

The Argentine steamer *Pampa* sailed for New York from Buenos Aires September 26 with a cargo of 4,000 tons of wheat and linseed. Two other steamers loaded with wheat will follow. This is the first time Argentine wheat has been exported to the United States.

Soya Beans for Incombustible Celluloid.

Tokio papers state that a Japanese professor has invented an incombustible celluloid which can be made from soya bean cake, and is superior to all others of the kind, in that its cost is only about 20 sen, or 10 cents, per pound, as compared with the normal cost of \$5 and \$6. It is also stated that a valuable lacquer varnish is obtained as a by-product.

A Pure Food Lexicon.

A pure food dictionary is being made by State Chemist Julius Hortvet of Minnesota and eight other federal and state Noah Websters on pure food. It will be to the food trade what the American pharmacopœia is in the drug world, and in addition will contain a pure drugs section of its own supplementing rather than changing the present pharmacopœia, which, according to Mr. Hortvet, is incomplete.



Consular Trade Notes and Brevities



Cuba's Greatest Sugar Crop.

Figures presented in the August 14 issue of Himely's Sugar Review indicate that Cuba's sugar production in the present year will be somewhat in excess of the estimate of 3,000,000 tons that has been the consensus of opinion of experts, and will surpass by approximately 500,000 tons the largest previous production. As an indication of the prosperity and rapid expansion of the sugar industry of Cuba, it is now announced that there will be 16 new mills grinding in the crop of 1916.

German's 1916 Beet Crop.

Latest estimates of 1916 sugar crop in Germany place the 1916 yield between 1,700,000 to 1,800,000 tons, an increase of about 300,000 tons. This probable increase is smaller than had been expected. It is likely that all the new sugar will be used up in Germany. The normal consumption in Germany before the war was 1,400,000 tons, but sweets are used in the army in many concentrated forms and this has added to the consumption. It is an adage, too, that the per capita consumption of sugar, once increased will never be lessened.

In a recent Berlin press cable Dr. Karl Helfferich, Secretary of the Interior, is reported as saying:

"Sugar production in the present year, owing to favorable weather and an increase in area amounting to 10 or 12 per cent, will be materially larger, so that it will be possible easily to meet the demand for local consumption, leaving enough beets for animal feed. It should be borne in mind that Germany in peace days was the greatest sugar exporter selling for the foreign markets almost half her total production."

Record Shipments of Coffee from Santos.

Exports of coffee from Santos during 1915-16 season totaled 11,445,533 bags of 60 kilos, or 132.28 pounds each—a figure equaled but once (in 1906-7) in the past 18 years. New York took 33 per cent of the 1915-16 shipments, and was the port's best customer. New Orleans and Havre ranked second and third, their share being 12.6 and 11.2 per cent, respectively.

Currant Crop of Greece.

The American consul at Patras, Greece, cables that the total new currant crop is estimated at 100,000 tons, or two-thirds crop. The market is firm.

Japanese Sugar from Formosa.

The sugar production of Formosa has risen since the island was taken over by the Japanese in 1895 from 75,000 to 350,000 tons annually. Millions of dollars have been invested by Japanese in sugar mills in Formosa, and the war has further stimulated the trade in sugar there. According to the Manchuria Daily News, 31,000 tons of Formosa sugar are to be sent to Austria, 3,000 tons to Hongkong, 15,000 tons to Canada, and 25,000 tons to India, China, Manchuria and Korea.

China Tea Trade Has Good Year.

The tea trade enjoyed a prosperous year. The largest profits, however, were made in the lower grades, as buyers, especially Russian, were active throughout the year. It is stated that the dealers made as much as 100 per cent profit on their first-crop purchases, and the second crop also sold at attractive prices. The quality of the teas was said to have been above the average.

Black-tea exports increased by more than 21,000,000 pounds, valued at over \$6,000,000. Green-tea exports increased by over 5,000,000 pounds, valued at over \$2,000,000. Brick tea, of which nearly all went to Russia, advanced by about 8,000,000 pounds.

Egg Preserving Plant in China.

The American egg preserving plant, owned and operated by the Amos Bird Company of Boston, Mass., and recently completed at Shanghai, China, is now handling 300,000 eggs daily. The product is either frozen or dried, and shipped to the United States, at present via the Pacific Coast. The frozen product is divided into three classes—whole eggs, egg yolks and whites of eggs. The dried product consists of whole eggs and egg yolks. In both instances the eggs are churned or "scrambled." The albumen is largely used in the manufacture of candles in the United States, while there is a demand for the frozen product at bakeries and hotels.

Brazilian Butter.

A Brazilian decree of December 31, 1915, which came into effect on May 1, 1916, provides that products offered for sale as butter must contain at least 80 per cent of butterfat and not more than 15 per cent of acid content, and must be free from extraneous substances other than salt and harmless vegetable colorings. The use of the latter is to be permitted for a period of two years from the date of promulgation of the decree. Renovated butter, margarine and all kinds of imitation butter must be so specified. It is also required that packages bear on the wrapper a statement of the name, trade-mark, place of origin and weight of contents.

Japanese Authorities Export Stores of Rice.

The Japanese authorities are now exporting rice which they purchased last year in order to regulate the price on the domestic market. The quantity purchased by the authorities last year is estimated at 1,485,000 bushels, according to a report in Commercial Japan, forwarded from Yokohama by Consul General Scidmore. Since the beginning of this year the authorities, through foreign and Japanese merchants, have exported 396,000 bushels to Seattle, San Francisco, Hawaii, European ports and other points. Many orders have come from Europe, but on account of the scarcity of vessels it is difficult to obtain tonnage. The shipments abroad during the first half of the year were, in pounds: Great Britain, 25,937,603; France, 528,267; United States, 26,734,114; Canada, 15,113,154; Australia, 2,897,413; Hawaii, 25,654,784; Sweden, 870,982; Transvaal, 261,801; Argentina, 91,310; and other countries, 162,759.

Newfoundland Fisheries Less Prosperous.

The estimated commercial value of the Newfoundland fisheries for 1915 is \$10,500,000, as compared with an estimate of \$11,300,000 for 1914, a decrease of \$800,000. This decrease is partially accounted for by the poor seal fishery and by the withdrawal of at least 3,000 young fishermen who have volunteered for service in the army and navy.

The estimated catch of codfish for 1915 amounted to 1,275,390 quintals of 112 pounds each, valued at \$8,517,535, as compared with 1,324,967 quintals, valued at \$8,370,000, for 1914; the decrease in the catch was due to weather conditions and scarcity of fish in certain localities, while the increase in value was caused by the advance in prices as a result of the war.

Shanghai Handles About Half of China's Foreign Trade.

In summarizing briefly the trade conditions prevailing in a number of the more important districts of China it may be stated that Shanghai leads, with 45 per cent of all the foreign commerce of the country. Out of a total value of \$67,625,562 for declared exports to the United States, Shanghai contributed \$33,478,245, or 49½ per cent. The totals shown for Shanghai are more than might be expected, considering the many difficulties encountered, such as the high prices caused by the war, the excessive freight rates and the

difficulty of securing cargo space, the enemy-trading restrictions as applied by the British authorities, the local attitude toward Japanese goods, and the monarchical movement at Peking, accompanied by insurrection in many provinces that made trading insecure and uncertain.

In spite of these obstacles, the export trade of Shanghai increased in 1915 by \$24,000,000, which went far to counter-balance the decrease in imports of about \$38,000,000.

Output of Shanghai Flour Mills Increasing.

Shanghai flour seems to be gradually replacing the foreign imported article, the increase in the quantity shipped to the other ports of China in 1915 being 79,982 tons, valued at \$2,405,411. Notwithstanding the increased exports, it is stated that local mills did not, in all instances, have a successful year, owing to the fact that they had to meet outstanding contracts at a low figure, wheat having advanced considerably since the contracts were entered into. Business in American flour continued to be unsatisfactory, due to high prices in the United States, high freights and shortage of tonnage. Small quantities came, however, as heretofore, largely to cater to the needs of the foreign community.

Altogether there are about 15 flour mills, large and small, in and about Shanghai. The daily product of all the mills is about 25,000 small (49-pound) sacks of flour, or approximately 6,000 barrels. The Fa Fung Co., which is the largest in Shanghai, operates three mills, all of which are in operation day and night. This company grinds about 7,000 bushels of wheat per day and produces about 5,000 small sacks of flour.

Fruit-Canning Methods in Canada Improved.

The principal canning factories in Canada are located on the Niagara Peninsula and in British Columbia, at Kelowna, Vernon and Mission. The government records show 82 establishments canning fruits and vegetables, with an annual valuation of \$5,971,082. There are 65 establishments that produce evaporated fruits, showing a valuation, according to the most recent report, of \$448,929.

The establishments both east and west are improving their methods, and the growers of fruit are also doing much better in Canada than formerly. With the present customs tariff against imports of canned and fresh fruits and the tendency of the Canadian product to improve, it is evident that this market will be more difficult for foreign products to enter than it has been during the past 10 or 15 years.

The Canadian customs tariff is as follows: Fruit in airtight tins, 2½ cents per pound, weight of package included; jams, jellies, etc., 3¾ cents per pound. Fresh fruits—oranges, free; apples, 40 cents per barrel of 3 boxes; pears, 50 cents per hundred pounds; plums, 30 cents per bushel; prunes, 67 cents per hundred pounds; dates and figs, 55 cents per hundred pounds; dried fruits, such as prunes, currants and raisins, two-thirds of a cent per pound; dried fruits, such as apples, apricots, etc., 25 per cent. A surtax of 7½ per cent ad valorem is charged on most imports into Canada, including all fruits except limes, in addition to the foregoing rates of duty.

Uruguay Encourages Medicinal Plant-Growing.

The government of Uruguay has just announced its intention of increasing the manufacture of chemical products in the Institute of Industrial Chemistry. Measures are being taken to extend the cultivation of medicinal plants needed in the preparation of chemical manufactures. The national inspection bureau is directed to prepare a program of study and experiments on the cultivation and acclimation of foreign medicinal plants, and also on the medicinal properties of native plants.

Chewing Gum in France.

The successful introduction of American chewing gum in St. Etienne, France, reports Vice-Consul Davis B. Levis from that place, where apparently it has a large sale, has been accomplished through methods frequently suggested to

American manufacturers of specialties and proprietary articles as a means of reaching retailers and jobbers.

The gum was brought to the attention of dealers by a wide-awake French salesman, working under the direction of a central agency in Paris. The goods were placed with many tobacconists, druggists, and others, possibly on consignment with those most skeptical of results. The dealers were instructed how to display them to the best advantage, and attractively lithographed figures, with placards in French, setting forth the use and qualities of the gum, were supplied. The product is labeled in French, and inclosed in waxed or oiled paper to retain the original properties and freshness. The retail selling price is the same as in the United States.

To attempt to sell such goods direct to dealers through correspondence or circulars is usually a misdirected effort. Machinery and certain specific articles may be introduced in that way, but for the sale of specialties over the counter, merchants generally have several articles of the same class, all with more or less popularity and advertising, to compete with the American goods. Sometimes these cost less and are obtained without the vexatious customs and import troubles.

American Flour-Mill Machinery for China.

The first flour mill in Chihli province is now nearing completion in the Italian concession at Tientsin, and is being equipped with American machinery supplied through an American firm at Shanghai. It is understood that the mill is erected by Japanese for Chinese capitalists, and will be known as the Shaohsing Flour Mill. The value of the American machinery provided for it is reported to be about \$70,000 United States currency.

The operations of the mill will be watched with considerable interest, since it will draw its supply of wheat from the northern part of the province of Shantung. This wheat is understood to be of a particularly high quality, and by proper management the Tientsin mill can put out a high grade of flour which should compete successfully with the products of the mills in the Shanghai and Yangtze Valley sections, where it is understood the indiscriminate use of wheat from various sections under the same mill trade-mark has resulted in uncertain flour standards.

Ginger Industry of Southern India.

Owing to the war the European and American markets have neglected East Indian ginger during the last two years, and the bulk of the crop has been bought up by the Indian and Arabian trade. Although America has never been a heavy buyer of Indian ginger, yet the purchases from the Madras Presidency have been of consequence for some time past, averaging at least \$30,000 a year. In the six months ended June 30, 1916, exports amounted to 199,344 pounds, valued at \$16,882; in the calendar year 1915 they totaled 732,368 pounds, valued at \$34,926.

The best ginger in India is said to be that produced on the Malabar coast and exported from Calicut. It is the produce of the Ernaad and Shernaad districts, 40 to 50 miles from Calicut, in the interior of South India.

Gibraltar Buys American Flour and Sugar.

Purchases of flour from the United States show great advances in Gibraltar as imports from France and Argentina have ceased.

It seems as though the entire demand will be diverted to the United States so long as prices in that market are no higher than those of Spain, the quantity available for export from which country is limited.

During 1915 219,805 sacks of American flour (bags of 110 pounds) were received, an increase of 172,445 sacks over the previous year.

The Spanish possessions in northern Africa continue to be the largest consumers of Gibraltar's imports of flour.

Owing to the scarcity of sugar and the consequent rise in price, local merchants have had difficulties in making their

purchases. Prior to the war this product was imported from Germany and Russia, with Hamburg and Danzig as ports of shipment. When these markets were closed Dutch sugar began to arrive, but did not continue long, as the Netherlands was unable to produce sufficient quantity for export. A few consignments were also received from Egypt, but the various difficulties prevented further imports from that quarter. Small parcels were also brought from Italy before exports from that country were prohibited.

The merchants here had no option but to draw on Spain for their wants to a certain extent, but the constant fluctuations of prices in the Spanish market tended to force them to look elsewhere for their supplies.

The only important source of supply left was the United States, and during the middle of 1915 American sugar began to arrive here.

American sugar met with the approval of importers and consumers. In the course of conversation with an importer the writer was informed that the quality of American granulated sugar is good, but that this market requires a larger granulation. A slight change in packing would be desirable, namely, instead of 100-pound bags they should be of 112 or 224 pounds each net, which are the commercial weights generally used here.

Chinese and American Flour at Hongkong.

Consul-General Anderson, at Hongkong, British China, writing early in August, said:

The flour market of Hongkong for the current half of 1916 has many uncertain elements, and at present it is somewhat doubtful as to exactly what American flour manufacturers and exporters may expect. The unfavorable turn of the trade with respect to American flour noted in the opening months of the year as a result of high prices in the United States and exceedingly high transpacific freight rates as well as a large crop of wheat in North China has been greatly modified, although as a matter of fact there is more promise than realization in the situation up to the present time. The probabilities are, however, that American flour will again come into the market in considerable quantities.

It is doubtful if Chinese flour will cut as much figure in the immediate future as it did during the winter season of 1915-16. The great influx of Chinese flour not only into the Chinese ports usually tributary to Hongkong's flour market, but into the flour markets of the Malay states and East Indies generally where Hongkong dealers customarily operate, was made possible by an unusually large crop of wheat in North China. About 200,000 bags of Shanghai flour came into this market, and of this stock some 110,000 bags remain. The flour is not of good quality, and as it is now getting old much of it must be disposed of at a loss.

Incidentally it may be added that some of the Shanghai mills are mixing hard Manchurian wheat with wheat from the Yangtze Valley and are thus improving the quality of their product. This is important in their efforts to get into the Java market, since that market demands a better grade of flour than the usual Chinese product. The Shanghai flours are better milled and are superior in color and well dressed in comparison with the Manchurian products, the export grades of which come only from Harbin and its immediate neighborhood.

FIRING OF JAPAN TEAS.

Not many outside the small circle of importers and wholesale dealers fully understand the differences in treatment which give the name to the three general divisions of Japan teas—pan fired, basket fired, and natural leaf.

Picking begins early in May each year, and the tender leaves are gathered by girls and then put through a steaming process for three or four minutes, to bring the natural oil to the surface of the tea. Then follows the process of firing in a wooden frame with tough Japanese paper stretched across it over charcoal fire at a temperature of about 120° F. While thus being fired the tea leaf is manipulated over charcoal fire for several hours by men who twist it in their palms into the form as it appears in the market. After this

follow two more firings at moderate temperatures, and the leaf becomes completely dry and brittle. This process of rapid drying of the fresh leaves preserves chlorophyll in its original form and gives the green amber tinge and delicious flavor to genuine Japan tea. Today modern machinery is invading even the field of tea curing, and yet the best tea is made by hand.

When tea is about to be exported it is subjected to a process of refiring. There are three kinds of refiring. The tea refired in a pan is short in its leaf, and is commonly known as "Pan Fired," while the tea fired in a bamboo basket is longer in leaf than the former and is called "Basket Fired." The third kind of refiring process is called "Porcelain Fired," which is commonly known as "Natural Leaf."

OUR OYSTER CROP AND SALMON PACK.

Flesh and fowl may fail us, but America's fish supply is going on forever, according to censuses of the finny tribes which inhabit our lakes, streams and coast waters from Alaska to the Florida keys. Dr. Hugh M. Smith, the leading authority in this country on the subject, tells of America's surpassing fisheries in a communication to the National Geographic Society.

With the acquisition of Alaska there came to us marine resources of such transcendent value as to overshadow all other natural products and to give the United States fisheries the leading place among the nations.

The creatures which support our fisheries are not all fish, but belong in various classes, some of those contributing most notably to the importance of the industry being crustaceans and mollusks. The total annual value of our fisheries at the present time is approximately \$76,000,000.

Among the fishery products in which America is pre-eminent, the most conspicuous is the oyster. This, our most important aquatic resource, is not only more valuable than in any other country, but more valuable than in all other countries combined. The American oyster has the further distinction of being a staple food of comparatively low price while in practically every other country having a well developed oyster industry the oyster is a high priced luxury. Its commanding position is shown in the fact that it is a commercial commodity in every coastwise state except two (Maine and New Hampshire); that it is the leading fishery product in fifteen states, and that it is the most extensively cultivated of all our aquatic animals. The annual oyster crop of the United States is about 35,000,000 bushels.

The salmon resources of the Pacific states are among the natural wonders of the western hemisphere, but they now take rank after those of Alaska, whose fisheries as a whole have experienced their remarkable development and attained their present surpassing importance chiefly because of the salmons. Since Alaska became part of the national domain, the total value of the products taken from the waters of the territory up to the present year has been nearly \$300,000,000; the fishery reached its climax in 1915, with a value of \$21,000,000, which is three times the purchase price of Alaska.

The ample experience of private fish culturists in all parts of the country confirms the opinion often expressed by national and state fishery officials, that under given conditions aquaculture may be more profitable than agriculture; that an acre of the best water may yield larger returns than an acre of the best land, and that food supplies of untold volume and value may be expected from what are now unused waters.

SIAMESE ROSEWOOD AND EBONY.

Ebony and rosewood are cut in Siam and exported in logs, 12 to 24 inches in circumference. This wood cutting is not a regular industry, but forms a desultory occupation while the people are not engaged in rice growing. As the logs will not float they are brought to Bangkok by boat or train. Chinese firms export the wood. It is sold by weight, at prices ranging from \$17 to \$30 a ton. The Siamese government is now taking measures to protect the forests which have been over-exploited.

EXPORTS FAR EXCEED 1915 RECORD.

Detailed figures issued September 13 by the Bureau of Foreign and Domestic Commerce, Department of Commerce, show that exports to Europe for the seven months ending in July totaled \$2,020,441,297. For the month they amounted to \$313,194,352. The total export trade for the seven months was \$2,926,221,372 and for the month it aggregated 445,472,467. The European exports for the same seven months of 1915 amounted to \$1,461,565,308, and for July last year they totaled \$180,070,714. The total exports for the seven months and individual month of 1915 were \$1,970,277,207 and \$268,468,702, respectively.

Imports for the seven months ending with July of this year totaled \$1,467,819,574, as compared with \$1,009,054,553 for the same period last year, while for July of this year they amounted to \$182,722,938, comparing with \$143,244,938 for July, 1915.

NEW COUNTERFEIT TEN-DOLLAR NOTE.

St. Louis merchants report the discovery of several notes in circulation which are a counterfeit of the ten-dollar Reserve Bank note. Government detectives believe them to be the work of local counterfeiters.

The notes are in \$10 denomination and bear the check letter B, which is the letter of the New York Federal Reserve Bank. The symbol is "2B," and the serial number, "364,427OA."

The notes are distinguished from the genuine by a deeper shade of green in the engraving on the back and by an imperfection in the reproduction of a photograph of Andrew Jackson on the face.

FIVE KINDS OF PACIFIC SALMON.

There are five grades or kinds of salmon taken on the Pacific coast. The king salmon, otherwise known as spring, on Puget Sound and Chinook on the Columbia River, has a pale to deep pink color and is of fine flavor. The sockeye or red salmon is caught on Puget Sound, in the Columbia river and along the Alaskan coast. The flesh of the sockeye is firm and of a rich, deep red color and fine flavor. The coho or silver salmon is a good food fish with a firm, solid flesh. It does not, however, retain its red color in the can. The humpback salmon, usually labeled "pink," is the smallest salmon. It stands well as a good fish, although its flesh is not as solid as that of the other varieties. The chum or keta salmon is another low-priced fish of good quality and is high in nutritive value. It does not, however, show the red color after cooking. The best grades of canned salmon are richer than meats in body building material and contain about the same amount of fats. Canned salmon is as digestible as the best sirloin steak. It is free from waste and nothing need be thrown away except the can. Practically all canned salmon is prepared on the Pacific coast and most of it north of Columbia River far up into the ice strewn waters of the Alaskan peninsula. The work of canning has been so improved that it is now carried on with the most sanitary methods.

PROGRESS OF AMERICAN SHIPBUILDING.

Steel merchant vessels building or under contract to be built in private American shipyards on September 1, 1916, according to builders' returns to the Bureau of Navigation, Department of Commerce, number 397 of 1,292,310 gross tons. During August new contracts for 20 such vessels of 75,060 gross tons were entered into and 12 vessels of 35,166 gross tons were completed. Foreign shipowners preponderate in recent contracts. The naval appropriation act became law on August 29, and the great naval construction program will soon require a large part of our shipbuilding facilities and a large increase in skilled labor. Of the warships 66, of 382,000 tons displacement, must be begun as soon as practicable. Steel plants are reported to be supplied with orders for ship plates late into 1917, and since the naval battle of Jutland, British yards are increasing their output of merchant ships. In the seven months from February 1 to Sep-

tember 1, 1916, American yards entered into contracts to build 229 steel vessels of 576,857 gross tons, and completed 55 such vessels of 206,545 gross tons.

Sperry Flour Company Statement.

The stockholders of the Sperry Flour Company of California at a recent meeting elected the following directors: Wm. H. Crocker, Hugh Goodfellow, Seward B. McNear, Dunning Rideout and J. S. Rosseter.

The financial statement of the company as of June 30 follows:

Equity, buildings and equipment, \$3,005,529; cash, \$23,995; notes, etc., receivable, \$1,448,623; working and trading assets, \$2,316,310; less current loans, etc., payable, \$2,176,347; total tangible assets, \$4,618,110; deduct special reserves, \$427,642; less expenses paid in advance, \$25,057; net tangible assets, \$4,215,626.

Net profits for the year were \$303,588, out of which dividends amounting to \$84,457 were paid, leaving a surplus of \$219,131.

New Coffee and Sugar Exchange.

Justice Tierney, in the New York Supreme Court on August 29, approved the application of the New York Coffee Exchange to change its name to the New York Coffee and Sugar Exchange, the change to become effective October 1.

Oregon Apple Shippers Now Use Baskets.

The Hood River Apple Growers' Association is this season, for the first time in the apple industry of the valley, adopting the bushel basket in which to ship its apples. A sufficient number of baskets to make 10 carloads of apples have been ordered. The apples thus shipped will be neither sized nor packed, but will be faced without wrappers. It is expected that a material saving will be made over the box shipment of the same grade of fruit, as the growers can pack the apples in the baskets either in the orchards or from the packing houses, as they will contain the orchard run. The apples placed in baskets for shipment will be for the nearby markets exclusively.

Crude Pepper and Food and Drugs Act.

The department has been requested to define its views with relation to the application of the Federal Food and Drugs Act to importations of crude pepper. Careful consideration has been given to representations made at a hearing accorded importers and distributors on March 2, 1916, and to information obtained by the department from other sources.

It is represented that crude peppers are ordinarily sold in the markets of the world on the basis of recognized commercial grades and that all peppers contain light berries in varying quantities.

The conclusion has been reached that the department will not hereafter, unless and until notice to the contrary be given, recommend the detention of crude pepper, offered for entry, on account of the presence therein of light berries in the amounts in which they are customarily present in crude pepper of recognized commercial grades.

On the other hand, the department will continue to recommend to customs officials that importations of crude pepper be detained if, upon examination, they are found to contain pepper shells or other adulterants, or to be wormy or otherwise to consist in whole or in part of a filthy, decomposed, or putrid substance, or in any wise to be injurious to health.

Ground peppers will be regarded as adulterated and misbranded, if upon examination they are found not to comply with the standards in Circular 19, Office of the Secretary of Agriculture.

The World's Coffee Cup.

The world will take a full 21,000,000 bag coffee harvest in 1916-17 for its full quota of demand, and this amount will be wanted even with the war continuing another year in the same magnitude. Should the war terminate in 1917, it will be a memorable year for a quick upturn in coffee, for the European nations now at strife will be active buyers of the bean to replenish depleted stocks.



Gleanings from the World of Foods



Georgians Urged to Grow Fruit.

In a recent issue the Atlanta Constitution editorially calls attention to the fact that Georgia people, especially in the cities, are eating spinach from Ohio, canteloupes from California and Colorado, peaches from Michigan and New York. A few Georgia-grown apples represent the home fruit industry. Why not have home-grown vegetables and fruit? This is asked by the editorial writer, and with the advantages of Georgia's climate and soil there is no reasonable objection to his stand for an awakened interest in and effort for home production.

Peeled Peaches for Drying.

California peach growers are experimenting with new methods for removing the skin from peaches to be dried for market. It is thought the quality of the dried fruit can be improved, but there are difficulties in the way of production. A chemical process is necessary, as no mechanical method of peeling that is satisfactory has been invented.

Oriental Market Small for Canned Goods.

It is the opinion of some well-posted dealers that China and Japan will not furnish a good market for American canned foods, at least for years. A large proportion of the people in the Oriental countries are too poor to buy imported food, except in the staple lines where bulk shipments are made at prices they can meet. Canned foods would be considered luxuries, and a higher standard of living and wages must be established before the working people could indulge in them.

Sweet Potato "Nuts" and "Flakes."

A South Carolina man has patented processes for manufacturing food products from the sweet potato which are said to be different from anything in the market, and of high nutritive value. He calls them "nuts" and "flakes," and those who have tested them call the new products delicious and appetizing.

Canned Chicken Blameless.

Under such titles as "Canned Chicken Poisoned Woman," articles were published in a number of eastern daily newspapers.

The Bureau of Publicity of the National Canners' Association investigated the case and learned from the attending physician that his diagnosis was ptomaine poison, "only apparent cause, symptom occurring shortly after eating canned chicken." It was also found that a portion of the suspected canned food which had been sent to the city health officer was properly analyzed, extracts taken, cultures made and guinea pigs inoculated. The health officer reported "chemical analysis for ptomaines showed them to be absent . . . All chemical and bacteriological tests were negative to ptomaines and anaerobic bacteria."

Paper Bottles for Milk.

Sanitary paper milk bottles will soon follow the sanitary paper drinking cup into public favor, if plans to amend the law governing the delivery of milk in glass bottles are successful, says a Philadelphia paper.

At the present time the use of the glass bottles is obligatory upon milk dealers. It is being argued that the new paper bottles will be far more sanitary than the glass milk bottles, as they will be used but once and then thrown away. The glass bottles are used and washed on an average of seventeen times before being smashed or lost.

The paper bottles may be bought for less than one cent each in large quantities, and will prove less expensive than the glass bottles in the long run, as the loss from breakage

of glass is great, and it is expensive to wash the glass bottles in a thorough manner.

State Dairy and Food Commissioner Foust of Pennsylvania has approved of the change from glass to paper, and Chief City Milk Inspector David Clegg of Philadelphia says it will mean a much more sanitary delivery of milk.

Charge Against Canned Soup Not Justified.

Several eastern dailies published articles that three persons had ptomaine poisoning from eating canned vegetable soup.

Investigation by the Bureau of Publicity of the National Canners' Association showed that while the attending physician diagnosed the illnesses as ptomaine poisoning he had not attributed it to the use of the canned food and that he had been treating the person for stomach trouble for the past two years.

Canned Food the Scapegoat.

In a western daily an article appeared under the title of "Baby Dies of Ptomaine After Eating Canned Goods."

Through an investigation carried on by the Bureau of Publicity of the National Canners' Association it was found that the attending physician had diagnosed the illness as ptomaine poison but could not say that the canned sweet potato was responsible and that inattention, unsatisfactory nursing and the surroundings had been a great factor in the case. Two other physicians who had been called in consultation did not agree with the diagnosis of the attending physician and were positive that the child was not suffering with ptomaine poisoning and that the eating of the canned food had nothing to do with the illness. The house and surroundings were most unsanitary.

A retraction was published, entitled "Canners Deny Possibility of Ptomaine Poisoning."

Meat Shipments in Interstate Commerce.

The following reply to inquiries was made by counsel of the Wholesale Grocers' Association:

"The Meat Inspection act applies only to shipments in interstate commerce. It therefore does not apply to shipments of canned meats which you may make from Indianapolis to other places in the State of Indiana, except in instances when, having received goods from some packer outside of Indiana, you deliver to your customers the same original packages which you have received.

"With regard to shipments to other States, the regulations provide that jobbers, wholesalers and others who do no slaughtering or processing and who receive meat products which are sound and which have been prepared under meat inspection and are properly labeled, may:

"(1) Break bulk, repack and ship same in interstate commerce, if each article bears the meat inspection label; or

"(2) Ship the original containers if properly labeled, provided a certificate is given to the carrier setting forth the nature of the shipment.

"Under these regulations, we are of the opinion that you may ship these products either in the case in which they are received or in broken lots, provided proper certificates are used."

New York City's Milk Problem.

The size of the problem presented in an endeavor to control the quality of milk supplied to New York City is one which is not equaled anywhere in the United States, and probably in only one other city of the world.

The population of the city is 5,500,000. They consume daily about 2,200,000 quarts of fluid milk and as much, or a little more, milk in other forms. The fluid milk is collected at about 750 country creameries and pasteurizing plants and

supplied by some 60,000 dairy farms located in nine different States and in Canada. When it arrives in the city it is distributed by about 150 wholesale dealers, using more than 6,000 delivery wagons and 14,000 retail stores.

Sea Mussels as a Food.

The sea mussel, one of the best and most abundant of sea foods, according to a bulletin recently issued by the United States Bureau of Fisheries, furnishes an example of waste of natural resources in America through failure to utilize it. In Europe the sea mussel is one of the most highly regarded shellfishes. Great Britain and Ireland consume about 35,000,000 pounds and little Holland over 65,000,000 pounds a year. In France about 400,000,000 pounds are produced annually and cooked in ways to delight the epicure.

The quantity of actual nutriment contained in the edible portions (the meat and liquor) of the mussel is slightly greater than in oysters and clams, and the mussel, therefore, contains at least as much food, pound for pound, as is found in related shellfish in common use. As the shells are thinner, a bushel of mussels contains considerably more food-stuffs than an equal quantity of oysters. A peck of sea mussels in the shell will supply all of the meat required for a meal for ten persons. Sea mussels are among the most easily digestible of foods, as has been demonstrated by the experience of consumers. Persons of weak digestion have found that they can eat sea mussels with impunity when meats cause them to suffer.

Sea mussels possess the advantage of being in season when oysters are out of season. But comparatively few oysters are marketed from April to September, and this is the season at which mussels are at their best on the coast of the New England and middle Atlantic states. Mussels can be cooked in the same ways as oysters and clams, and will afford a welcome change in the diet list.

Five Hundred Millions a Month.

Our exports for the first time have passed the half-billion-dollar-a-month mark. In August, according to statistics of the Bureau of Foreign and Domestic Commerce, our exports were \$510,000,000. That is not only a record for this country, but for all countries. It is \$35,000,000 higher than the previous high record reached in May. Imports for August show a decrease; the total was \$199,000,000. Exports for the year ended August total \$4,750,000,000, and imports \$2,300,000,000; both totals are far in advance of those for the similar period last year. The favorable trade balance for August was \$311,000,000.

Pacific Salmon Disappearing.

"The phenomenal salmon packs of a few years ago in Alaska, as well as in Puget Sound, are a thing of the past," declared Captain J. Flynn of the steamer Redondo on arrival at Bellingham, Wash., to discharge 6,000 cases of salmon consigned to the Pacific American Fisheries Company by the Point Ward Packing Company. "It is a condition partially due to the fact that there are ten canneries now, where one was located a few years ago; all fishing the same ground and dividing up the catch that a short time ago was taken to one plant. On the other hand, the salmon is gradually disappearing, just as they have done on the Atlantic Coast, and as the codfish is doing, as well as the halibut. The two latter have not disappeared entirely, but it is necessary to go much farther to find them now."

Asks Law to Compel Labeling of Eggs.

Legislation by the State Public Utilities Commission compelling shippers of eggs to bill their shipments as either "candled" or "uncandled" eggs is being sought by Assistant Commissioner John B. Newman of the Illinois State Food Commission.

Mr. Newman presented his request to Commissioner Thompson, and it is likely that the matter will be taken up by the commission shortly.

Mr. Newman said that the measure was asked primarily to

aid in the prosecution of merchants who dealt in eggs of doubtful character. He also asserted that the loss to the producers totaled \$5,000,000 annually in the State of Illinois through the indiscriminate shipping of eggs.

Spice and Extract Manufacturers Join.

A movement is on foot looking to the amalgamation into one representative body of the American Spice Trade Association and the Flavoring Manufacturers' Association. A conference committee, composed of an equal number of representatives of each organization, is now at work on the details of the proposed merger, and is expected to report the results of its work within a few days.

Sardine Packers Join in Inspection Campaign.

The inspection of the packing of sardines, both as to the use of proper raw products and the sanitation of factories, was undertaken by the National Canners' Association on April 15, 1916. The expenses of this inspection will be approximately \$40,000, which is paid by the sardine packers under a special assessment. In addition to this, the installation of the inspection methods has cost at least \$1,000 per factory, which will add \$50,000. This means that the sardine packers will this year expend about \$90,000 in order to better their products.

A recent meeting of sardine packers was held at Eastport, Maine, to discuss inspection methods and results. Barring some minor method details, every packer present expressed the greatest confidence in the inspection, and stated that it had been even more successful than had been anticipated. Of course, during the first year, without any guiding precedents, some mistakes have been made, but when the proposition has been considered as a whole, the results could not have been more satisfactory. The output has been greatly improved in quality and grade, and further improvements for the coming year are now under discussion. This inspection is unique and of interest to the whole canning industry, because it demonstrates the possibility of raising the general quality of all foods that go into tin cans. Such results will tend to greatly increase consumption in all lines of canned foods.

U. S. Importations of Meat.

Meat prices in the United States are at a level which ordinarily would induce imports. But these are no ordinary times. Imports of meat are 50 per cent less than last year. Argentina and Australia are sending their beef and mutton to Europe. Curiously enough, by far the greater part of our imports of meats are coming from a rather new source, the recently completed freezing plants in the province of Sao Paulo, Brazil. Out of a million and a half pounds imported from all sources in May, more than two-thirds originated in Brazil.

England's imports of meats are very large, and for the most part are landed at London. In May of this year England imported 55 million pounds of beef and 30 million pounds of mutton. Of the beef, 27 million pounds came from the Argentine, 13 million from the United States, 8 million from New Zealand and 3 million from Uruguay. The sources of mutton were rather different. New Zealand was the principal country of origin, sending 21 million pounds. Australia would in normal years contribute largely, having shipped 16 million pounds in May, 1915, but in May this year, probably as a result of droughts, furnished a very small quantity, leaving Argentina in second place, with 7 million, and the United States third, with a million pounds.

Yakima Pears Go to South America.

Joseph Di Giorgio, president of the Earl Fruit Company, states that a considerable quantity of the pears taken by cash buyers in the Yakima Valley, Washington, recently and being shipped eastward will be exported to South America. "We are opening up a large fruit trade with South America," said Mr. Di Giorgio. "This development has taken place especially since the European war has interfered with the export of fruit to that country."

WHY SACCHARIN WON

The Long, Contested Suit of the Monsanto Chemical Works of Saint Louis, Manufacturers of Saccharin, Is Finally Decided in Its Favor.

The Supreme Court of the State of Missouri in handing down its *unanimous* decision that Saccharin is not deleterious to health, and declaring null and void the statute prohibiting its use recognized the principle that the amount used must be considered. This, the Supreme Court of the United States also did in its decision in the famous Bleached Flour case.

An excessive use of anything is harmful, whether it be sugar, salt or water.

SACCHARIN is much more desirable than sugar as a sweetening agent for soft drinks from any view point: (First)—Healthfulness; (Second)—Economy.

In using SACCHARIN the danger from the use of sugar is eliminated, and the infinitesimal amount of SACCHARIN that is required to sweeten cannot possibly be harmful to any one, either adults or children.

Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

Use SACCHARIN to sweeten and do not hesitate to declare its use on the label. **Such declaration stamps your goods as being healthful.**

MONSANTO CHEMICAL WORKS

Manufacturers of Saccharin

ST. LOUIS

Branch: Platt and Pearl Streets, New York



Washington D.C. News Letter



WASHINGTON, Sept. 28.—Plans are being formed now for attempts at food legislation next winter. That is true notwithstanding that it was apparently day before yesterday that Congress quit work for the summer vacation period. Since the uplift brethren dethroned reason in the business of legislating for 100,000,000 Americans, who would not tolerate such methods in business, so much time is wasted in hurrah that session of Congress treads upon the heels of session, so fast they come. It is necessary that plans be made now. It will be too late a month from now.

At present it seems certain another series of drives will be made against the false pretense laws, the chief of which is that the government desires to collect revenue from the manufacturers of oleomargarine; also the sellers thereof, when as a matter of fact the desire of those who put the oleomargarine law on the books is to prevent the manufacture and sale of the substitute for butter even when it is properly labeled. The upholders of the false pretense statute, naturally, are also at work. They know the rottenness of the legislation whereby the public is misled into believing that oleomargarine is a deleterious substance and therefore one the manufacture and sale of which is to be closely supervised by the men who superintend the making of whiskey, the distribution of opium, cocaine and other drugs, which, when not used for medicinal purposes, are harmful.

Advocates of a change in the oleomargarine law will have the collateral help of the advocates of the Linthicum bill to place creameries on the list of establishments at which the national government supervises operations with a view to preserving the public health. Campaigns and investigations in the eastern part of the country are clearly showing there is probably three or four times as much danger to health in the uninspected and unsupervised dairies of the country as in the establishments where animals are slaughtered.

Of course, the AMERICAN FOOD JOURNAL has no politics, but it is necessary, in order that an accurate picture may be presented, to say there are a good many Democrats in Congress who have grave doubts about the ability of their party to remain in the seats of the mighty after November. Inasmuch as the backbone of the party comes from the South and inasmuch as cottonseed oil is one of the chief constituents of oleomargarine, and the oleo oil comes from the beef cattle of the Southwest, the benefit, if any, to be derived from a larger use of the two southern products, must be conferred at a session of Congress controlled by members of that party while it is in power. If the party is not to be continued after March 4 next, it is incumbent upon those who believe there should be a larger use of cottonseed oil as a food to busy themselves during the session beginning in December and ending in March.

Although it is a short session, the whole situation, it is figured, will be more favorable notwithstanding the fact that it is a short session. Before it begins the Democrats will know whether they have won or lost. If they have lost, then this will be their last chance to vote as they believe, knowing they have the power to translate their convictions into legislation. If they have won, they will know they have the approval of the people and will be more apt to vote their convictions than if they were facing a campaign for re-election, uncertain as to whether the people have an adequate understanding of the essentially false legislation that has been on the books because the butter makers assiduously spread the impression that oleomargarine was something to be used, if at all, with poison labels stuck up all over the places where it might be offered in place of doubtful butter or undoubtedly bad butter.

As usual, every man who has a word to say about the oleomargarine bill will be accused, by insinuation, of being on the pay roll of a packer. The charge will be made by the men who have been living off the contributions of butter makers who know that once the impression that oleomargarine is

something bad is dispelled, there will be strong, natural competition between the two bread lubricants. They do not want that competition, except with handicaps upon the synthetic butter.

The butter organization will be solidly back of a bill requiring that when butter is used as a component of oleomargarine it shall be butter made from pasteurized cream. In other words, the factory butter men will endeavor to have the congressmen who think they are voting for the good of the farmer's pocketbook every time they vote against a bill to take the handicaps off oleo, enact legislation the effect of which will be to make it unlawful for the makers of butter substitute to use the product of the farm-wife dairy. Perhaps if every farmer in the country could be fully advised as to the meaning of that bill, the fight to remove the handicap from oleomargarine would be made easier.

Naturally every enthusiastic, and therefore ignorant, "pure food" fanatic will be lined up in favor of the continuance of the false pretense law, which prevents the competition that would naturally exist between butter and oleomargarine but for the assiduously cultivated impression that the substitute is a health-destroying article of commerce, the makers of which should be thankful that they are allowed to manufacture it at all. There is only one thing that can be said about that class of people and that is that education increases notwithstanding their efforts to prevent the use of anything, as food, that had not been standardized, as they think, about the time Adam's great grandsons were cutting teeth.

Although nothing is definitely known about plans for pushing the mixed flour bill, it is presumed those who began the fight against the false pretense law on that subject will make another effort during the coming session. Representative Rainey of Illinois, just at the close of the session, made several moves in behalf of that bill, or perhaps it would be more accurate to say he made several moves in behalf of publicity for that measure. The law on that subject prevents the competition that would naturally take place between an all-wheat and a mixed corn and wheat flour by surrounding the manufacturing processes with the same supervision that is given the manufacture of alcoholic beverages. Its pretense is that the government desires to raise revenue from mixed flour as it does from alcoholic drinks, when as a matter of fact the desire is to make the mixing of wheat and corn flour so onerous an operation that no one could make a profit therefrom. The all-wheat millers, in objecting to mixing, are resorting to the same despicable tactics as have distinguished the advocates of the false pretense oleomargarine revenue law that hold out the idea to the public that they are fighting for pure food, for freedom from deception in the food trade, when as a matter of fact all they are doing is to keep down competition such as would grow up for them and their products if all the questions as to what the vendor of oleomargarine and the mixer of flours can do were left to be decided under the so-called food and drugs law, which forbids false or misleading brands and labels and is sufficient to prevent any manufacturer of a substitute for butter or all-wheat flour from selling his commodity under false pretenses. At present all the false pretenses are on the side of butter and all-wheat flour.

Soda Fountains to Have Sterilizing Outfits.

Fifteen soda and ice cream fountains in Birmingham, Ala., either have installed or are about to install sterilizing outfits. This action on their part is in strict compliance with an article in Ordinance No. 301-C, which requires that all soda water fountains, ice cream parlors, restaurants, hotel cafes and all vendors of drink or food shall thoroughly cleanse and sterilize all utensils in which these are served.

More than nine million young trees and ten thousand pounds of seed were planted on the national forests in 1914.

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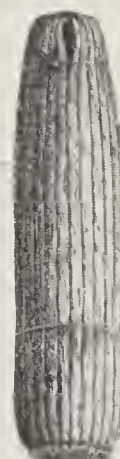
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Rapid Expansion of Argentina Meat Exports

Beef and Mutton from the Great South American Republic Find Buyers in Many Foreign Markets

ALTHOUGH the exports of mutton from Argentina rose from less than 200,000 carcasses in 1884 to over 2,000,000 in 1895, they have grown rather slowly since that year, exceeding 3,000,000 in 1902 and reaching the high point of 3,679,587 carcasses in 1904. The maximum output of frozen mutton under present conditions seems to have been reached in Argentina. Up to the year 1913 the number of carcasses exported annually fluctuated from a little less to somewhat more than 3,000,000, and in 1912 there were fewer carcasses exported than in 1902. In 1913 fewer carcasses of frozen mutton were exported than in any year since 1896. Great Britain, the great consumer of meat exports from the Americas, gets only about 20 per cent of her mutton from Argentina. As the export mutton trade of the southern republic is therefore of somewhat minor importance at present, and as pork production is negligible, this paper will deal principally with the growth of the Argentine beef industry and its effects upon trade in the United States.

The area of the Argentine Republic is in round numbers 1,138,000 square miles. On this area there are 29,000,000 cattle, 80,000,000 sheep, and 3,000,000 hogs. Argentina ranks next to Australia in number of sheep, but is fourth in number of cattle, European Russia, the United States, and British India far outnumbering her in this respect. In the hog industry she is a negligible factor, hardly producing enough pork to supply her own small demands.

On this area of over one and one-eighth million square miles there are 25 cattle per square mile, very few of which are used for dairy purposes, and an average of 70 sheep per square mile, nearly all of which are used for wool production. The United States, on the other hand, has on its continental area of almost 3,000,000 square miles an average of only 19 cattle per square mile, and of these nearly two-fifths are classed by the statisticians as milch cows. As against Argentina's 70 sheep per square mile we have 17, but the mutton qualities are more strongly developed in our sheep than in those of Argentina. The United States has nearly 100,000,000 people to support on its 3,000,000 square miles of continental territory, while Argentina, with an area almost one-half as large, has less than one-tenth the population.

The beef exports from Argentina started in the year 1884, when 112 quarters of frozen beef were shipped. From then on the trade grew rather spasmodically until 1899, when exported frozen beef quarters jumped from 71,463 to 113,984. They passed the million mark in 1904 and the two-million mark in 1912. The year 1901 is notable in the Argentine beef trade, for in that year 24,919 quarters of chilled beef were exported. This trade has grown with only one setback (in 1908) until, in 1913, 2,989,805 quarters were exported, considerably more than the amount of 351,748,333 pounds of fresh beef exported by the United States in 1901, the year the Argentine chilled-beef trade began, and which year marked the beginning of the decline in United States exports of fresh beef.

Argentine chilled beef normally sells on the English market within 1½ to 2 cents a pound of the price of English beef, and Argentine frozen beef from 1¾ to 2½ cents a pound lower than Argentine chilled.

The destination of nearly all of the Argentine beef is England, and Argentina is now the mainstay of the English beef market, as the following table shows. This table also shows the comparatively small influence of Argentine mutton in the English market:

IMPORTS OF MEAT INTO GREAT BRITAIN.

(From Annual Statement of Trade of United Kingdom, etc.)

Year.	Course.	Beef, chilled. Cwts.	Beef, frozen. Cwts.	Mutton, frozen. Cwts.
1913—				
Argentina	5,216,022	1,955,853	1,012,347
Other	31,982	398,840	4,191,900
1912—				
Argentina	3,871,140	2,723,757	1,589,200
Other	5,310	226,120	3,269,509
1911—				
Argentina	3,753,140	2,357,878	1,782,066
Other	177,528	93,477	3,430,829
1910—				
Argentina	2,710,747	2,188,122	1,419,653
Other	477,968	159,521	3,841,970
1909—				
Argentina	1,826,612	2,381,543	1,437,375
Other	832,567	157,921	3,130,572

ARGENTINE METHODS OF PRODUCTION.

Argentina is a vast grazing ground. Situated largely in tropical or subtropical latitudes, pasture is available during the entire year, and shelter is rarely used, except for high-class breeding and show animals. Wonderful fatness and bloom are obtained by the cattle on the grazing lands, and only when disease, droughts, or locusts come does the estanciero have much cause for worry. These visitations, however, are quite sufficient and doubtless tend to check the expansion of the industry. Until quite recently grain was fed only to show and breeding animals. At present some grain is being used for fattening market stock.

The droughts, of course, affect the crops more immediately than they do the animals which may depend upon them, and the Argentine farmer who is depending largely on his corn or wheat is hit harder by protracted droughts than is the cattleman. In an earlier paper it has been observed that in Argentina cattle growing is a much more certain enterprise than grain growing, and the people therefore prefer to raise cattle where the prices are remunerative, and that in 1913, on account of satisfactory cattle prices, there was a tendency to convert grain lands into alfalfa pastures.

The enormous use of alfalfa pasture for fattening cattle in Argentina can not be overlooked in any consideration of the industry in that country. With its wonderful resistance to drought, no plant seems to rival it for the purpose, and when prices are at a satisfactory level a country so well supplied as Argentina with alfalfa pasturage has an assured position in the trade. It appears that the rapid growth of the beef-cattle industry during the past 15 years has been coincident with the development of alfalfa for grazing purposes. Indeed, it may be said that the extensive seeding of alfalfa pastures by Argentine estancieros is what has made the expansion of the cattle industry possible.

Melvin also observed that alfalfa is not used nearly so much as it could be. He naturally suggests that the extension of the use of alfalfa for grazing will depend on the maintenance of remunerative prices for cattle.

As shown in tables of trade reports, the increase in the supply of breeding animals does not appear to be keeping pace with the slaughter of animals for beef, and Melvin and others have called attention to the fact that Argentina is now slaughtering up to the limit of its present annual output. The sale and slaughter of females has been a matter of public investigation in Argentina, but it is believed that the high prices have checked this practice and are now tending to encourage breeding operations.

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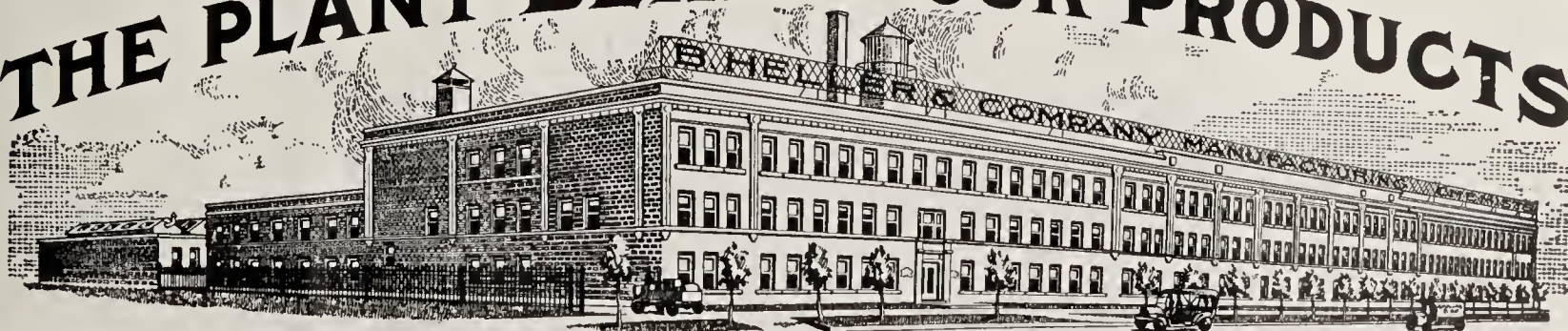
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According to Department of Agriculture Bulletin No. 118: Apply 0.62 pounds Borax to every 10 cubic feet of manure. Apply Borax particularly around edges; sprinkle with 2 or 3 gallons of water. This treatment should be repeated with each addition of fresh manure. Flies lay their eggs in fresh manure. Borax prevents their hatching.

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THE FIGHT FOR PURE FOODS.

At the recent meeting of the Ohio State Cannery Association, L. G. Bingham, state cannery inspector, insisted that pure food laws are a good thing and have done much to protect the public from deleterious food-stuffs and honest packers from unfair competition.

To illustrate what was common before the era of pure food laws he gave two recipes which within his knowledge were used by manufacturers in the 'eighties of the last century. The first was as follows:

Two buckets of dried apples, four buckets of canned, or pulped pumpkin, half ounce of tartaric acid, cook in a jacket kettle until the apples were cooked soft, then seasoned with oil of cinnamon and nutmeg, and a little clove; then packed in wooden buckets and labeled "Pure Apple Butter."

And here was the other:

One barrel of apple plup, one barrel of pumpkin pulp, one barrel tomato pulp, or tomato water, cooked and seasoned as before.

To uninitiates the second might seem like unto the first; but the product of the second recipe was dyed a rich red with artificial coloring matter and labeled and sold as "Tomato Catsup." The speaker went on to say that while purity requirements must be met at the present time there are devices sometimes resorted to for the purpose of lowering the cost of production that while they may give unscrupulous manufacturers a temporary advantage are rightfully resented by consumers and in the end are injurious to the trade. Illustrating what he meant, he proceeded:

Chief among these abuses is that of allowing such crops as peas and corn to mature until they become tough, hard and unpalatable, then paying the grower for them by the ton in this dry state, which cheapens first cost of raw material; then soaking in water, as is done with peas, or adding much larger content of water to the can, as is done with corn. This does materially cheapen the product and still leaves it in conformity, and when he buys one of these cans thus filled with unpalatable, dry, tasteless stuff, would resort to another brand and leave this junk on the shelf while he cleaned the shelves of the luscious, nourishing foods. But, unfortunately, in the majority of cases it does not work this way. The good housewife, being disgusted, cuts canned foods from her menu for months, and in many cases for the whole year, thus cutting consumption very materially.

He also referred to "light fills," another device for cheapening the product and getting ahead of the consumer, which is under the ban of law but still is practiced to some extent. Then he observed—and it is the truth—that the men who engage in these dishonest practices are pirates, and that the only reason why they are able to flourish is that the larger proportion of the goods placed upon the market are luscious, palatable and nutritious. In the canning industry as in all other business, honesty is the best policy. It behooves organizations of canners to do their best to conserve the interests of the consumer, not only by maintaining a high standard in their own output but by helping to expose the cheats. In the fight for pure foods the interests of honest manufacturers are identical with those of the consuming public.

Eggs and butter in the Chicago market met a remarkable demand during August, and the month was the best ever known in the trade. Reports of holdings on September 1 showed a movement of

308,000 cases of eggs out of storage during August, an increase of 144,000 cases over the same month last year. Butter was reported to show a shortage of 1,476,000 pounds, while there had been an excess of 9,000,000 pounds on August 1.

Food Commissioner Dillon of New York was obliged to rescind his order requiring all cold storage eggs to be stamped. The practical impossibility of stamping many millions of eggs had not been well considered. Had one hundred men been put at the job of stamping the eggs, the entire company would have died of old age before their job was finished. This without touching the daily receipts, which alone would employ a force as big as that concentrated at the Plattsburg camp.

Three meat inspectors of Brooklyn, New York, have been dropped from the Health Department, charged with accepting bribes from dealers. Dismissal from the service is not adequate punishment if the men are guilty. They should have been indicted, convicted, and sent to prison.

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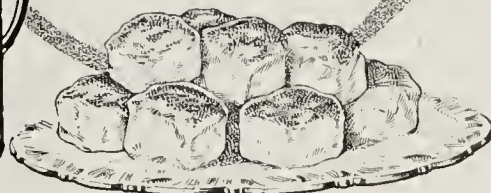
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GRENOBLE WALNUT CROP.

As reported in Commerce Reports for September 27, 1915, the growing crops of Grenoble walnuts promised large and fine yields up to the middle of August, but the dry heat then prevailing persisted practically without interruption right up to harvesting time, adversely affecting the quality of the maturing fruit, and when housed the crops were found to be lighter in weight than usual. The proportion of shriveled and worthless nuts was also greater than expected, the average being 20 and in some localities even 30 per cent.

As regards general appearance, the crops were fine, although a little deceiving perhaps as to quality. The nuts were clean looking and bright, fairly large, and uniform in size, and they possessed naturally that particular light-straw color required to enhance their value commercially. The shells were remarkably free from black spots and other disfiguring stains.

Harvesting operations were much impeded by a shortage of farm labor, with the result that exportations to the United States, which in normal times usually begin about the 10th or 15th of October did not commence until the end of the month. Even then the quantities shipped were insignificant, not from a scarcity of merchandise but from the lack of shipping facilities. As a consequence very few Grenoble table nuts reached New York in time for either the Thanksgiving or the Christmas trade. In the meantime, and during the whole of the month of November, bales and bales of nuts piled up on the docks at Marseilles awaiting shipment, and only late in December was the bulk of the merchandise sent forward.

The season's campaign, though late in opening, was not less animated on that account. The market opened firm at relatively high prices, but this did not prevent operations, sales being made for both home and foreign consumption on a large scale. The demand for America was especially active, the extremes of rates paid varying between \$20.85 and \$23.16 per 100 kilos (220.46 pounds), the average being \$22.20 c. f. New York.

Previous estimates as to the probable outcome of the crops have proved to be substantially correct, the figures quoted (4,000 tons) having been about realized.

Exports to the United States in 1915 totaled 4,550,000 pounds (2,501,800 pounds unshelled, 2,048,200 pounds shelled), as against 2,576,381 pounds (1,350,771 pounds unshelled, 1,225,610 pounds shelled) in 1914. Of these quantities the shipments of new-crop nuts during the December quarter amounted to 2,771,000 pounds in 1915 and 1,657,176 pounds in 1914, chiefly unshelled.

It should be noted that the foregoing figures do not accurately represent total exportations to the United States, many shipments being consigned at Marseilles—to what extent is not known, but, judging from the purchases made by merchants of that city in this region, they must be important, possibly a tenth or more of the quantities stated above. At the present date all of the 1915 crop that is on hand here still unsold may be estimated at about 500 sacks (of 50 kilos) of walnuts in the shell and some 2,500 cases (of 25 kilos) of shelled walnuts.

Prices of shelled walnuts vary greatly, according to kind and quality, and show a wide range of values, which to the uninitiated may appear exaggerated but which are nevertheless correct. As an instance, the extremes of rates paid for shelled nuts, whether of the old or the new crop, were the equivalent of \$43 and \$77.20 per 100 kilos c. f. New York. The average prices paid for the different qualities were: For pure Mayettes, \$76 to \$77; mixed Mayettes, \$73 to \$75; pure Chaberts, \$55 to \$59; second quality Chabertes, \$47 to \$51; broken pieces, etc., \$38 to \$43.

At one time it seemed doubtful whether the exportation of nuts would be allowed to continue, for the French Government, by a decree dated November 22, 1915, prohibited generally the exportation of walnuts, filberts and almonds. A little later, however, following the energetic action of influential commercial organizations, this decree was abrogated and the exportation of these nuts permitted for England and all its colonies, America, Russia, Japan, Serbia, and Montenegro.

INDIA'S MULBERRY FOREST.

Perhaps the only mulberry forest in the world is to be found at Changa Manga near Lahore. It is some 10,000 acres in extent and has hitherto been used only for fuel and timber, demonstrating that mulberry can be profitably grown apart altogether from its great value in providing food for silkworms.

So a month ago Commissioner Booth-Tucker of the Salvation Army asked permission of the Punjab Government to take advantage of the immense supply of foliage in this forest by establishing an annual silk camp during the months of February and March for the rearing of silkworms on a large scale, with a view to popularizing the industry throughout the Punjab and other parts of India. The lieutenant governor expressed his cordial approval of the scheme, and 5 acres have been assigned within the forest for the camp. Operations were commenced early in January when a party was sent in advance to make the preliminary arrangements for erecting sheds for some two or three million silkworms. Different systems of housing the worms will be demonstrated.

As far back as May, 1915, a supply of disease-free eggs of the best varieties were ordered from Europe. They reached the Simla Silk School in October, and were there hibernated in a special machine provided for the purpose. This feature is of recent introduction, but it is an important link in the successful rearing of the worms; it helps to insure a vigorous race that will produce cocoons rich in silk and also is a protection against disease. Hatching the eggs is another important link. Special hatching machines of a simple pattern have been used by the Salvation Army during the last three or four years; they insure uniform heat and hatch out the eggs simultaneously, thus avoiding much trouble, delay, and loss of eggs from chilling.

More than 50 tents have been put up for the accommodation of the workers and staff and for lectures and demonstrations. The camp already has about 100 workers, which number is to be increased to 150. It is hoped that the camp will attract a constant stream of visitors from the neighboring villages. They will be allowed to take away a small supply of worms to their own homes, and the cocoons will be bought from them and a careful list of the best rearers will be kept for future use. It is hoped that local governments and Indian States will send representatives to study the silkworm industry at close range with a view to introducing it in their own localities. Thus an impetus will be given to sericulture over the whole of India.

Salmon Packers Resent Double Tax.

The constitutional right of the Legislature of the Territory of Alaska to impose license taxes for purposes of revenue was upheld recently in a decision of the United States Circuit Court of Appeals at San Francisco in three appeals by salmon-packing companies. On April 29, 1915, the Territorial Legislature imposed license fees on all fishing companies and as salmon packers were already paying fees to the government under an act of Congress of 1906, they protested the payment of the double tax. Judge Hunt in rendering his decision stated that in his opinion the Legislature had the power to levy additional taxes. The case will probably be taken to the United States Supreme Court by the salmon packers. The packing companies bringing the suit were the Alaska Salmon Company, the Hoonah Packing Company, and the Alaska-Pacific Fisheries Company.

The bulk of the sugar supplies in South Africa is obtained from Natal and Zululand, which are the principal districts in this country raising sugar cane. Up to 1915 it was necessary from time to time to import sugar, but the local production has now reached approximately 118,000 tons, which practically represents the consumption in the Union. Of this 118,000 tons, about 5,000 tons were imported from Portuguese West Africa under an agreement with the old Transvaal government, whereby it is admitted free of import duty.



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AN IMPORTANT ANNOUNCEMENT

TO THE JOBBER AND RETAILER



The St. James Importing Company, of New York and London, the well-known distributors of Waw Waw Sauce, has been bought by men of strong financial backing who bring to the Company not only ample resources but also the full benefits of many years' experience with one of the largest and most successful manufacturers of food products in the country.

Plans are already laid to place Waw Waw in its deserved position as the King of Table Sauces.

We cannot make Waw Waw Sauce itself any better but we can and will make Waw Waw Sauce a better seller.

An extensive advertising campaign in the leading Journals is now in course of preparation. No pains, expense or effort will be spared to make Waw Waw a leader in easy, steady selling, just as it is now a leader in quality.

Full details of the new plans will be mailed to jobbers and retailers throughout the country. In the meantime the already increasing inflows of orders are being filled promptly from our New York warehouse.

SPECIAL—If you are not fully acquainted with the unusual merit of Waw Waw Sauce, write at once and a full size sample bottle will be sent for trial on your own table.

St. James Importing Company NEW YORK

FROZEN AND DRIED EGGS.

The frozen and dried egg industry, declares a new publication of the Department of Agriculture, is a permanent one because it meets a distinct economic need. Many eggs which could not stand long shipments may be preserved as wholesome food by freezing them out of the shell or by drying. In the beginning, however, there was a natural popular prejudice against the business, which was increased by the ignorance and carelessness of some of the pioneers. It was under these conditions that the Department of Agriculture undertook a study of the problem in order to lay the groundwork for a scientific preparation of an extremely perishable product. Some of the results of this study have just been published in a professional paper, Bulletin No. 224, "A Study of the Preparation of Frozen and Dried Eggs in the Producing Section."

The eggs commonly used by reputable firms for breaking are small or oversized eggs and dirty, cracked or shrunken eggs. To the trade these are known as "seconds." They are not to be confused with eggs that are unfit for human use, such as the classes known as black, white, mixed, and sour rots, green whites, eggs with stuck yolks, musty and moldy eggs, blood rings, etc. These should be rejected entirely or else used for tanning purposes only. Eggs with a bad odor should be rejected absolutely.

Careful candling before the eggs go to the breaking room is one of the principal points upon the importance of which the new bulletin insists. Careful candling is not only necessary to prevent the use of unfit eggs, but it will also prevent the waste of a number of perfectly good eggs which might otherwise be rejected. In order to insure that the eggs are well candled, the bulletin recommends some system by which the work of individual candlers may be checked. Eggs that it is found difficult to grade should be set aside by the regular candlers for examination by an expert. Furthermore, the eggs should be graded again when out of the shell, for certain kinds of infection can only be detected when the eggs have been broken. When grading eggs out of the shell, only two grades should be recognized—food eggs and tanner's eggs.

While it is desirable, from a financial standpoint, that the breakers should work with rapidity, too much speed is not to be desired because of the danger that unfit eggs may be included with good ones before the breaker can detect the difference. When this happens, no attempt should be made to save the good eggs. In practice, it was found that in order to prevent waste and to insure good grading, no more than three eggs should be broken into a cup before it is emptied. It was also found that from twelve to sixteen eggs a minute is as rapid work as can be done satisfactorily. Even this is not possible if the breakers are permitted to talk or their attention is distracted from their work in other ways.

The bulletin also discusses in some detail the measures necessary to secure cleanliness in egg-breaking establishments.

It emphasizes the necessity for separate rooms for chilling, candling, breaking, freezing and drying the eggs. Each should be maintained at a definite temperature by artificial refrigeration. A room for washing and sterilizing the utensils should adjoin the breaking room.

SARSAPARILLA IN PORTO RICO.

Sarsaparilla grows practically all over the island of Porto Rico, but for some reason it has not been exploited as an article of export. It is in common use in the country, where "jibaros" peddling it in small bundles are to be seen constantly. It is used for medicinal purposes, brewed in the form of various teas and other decoctions, and also steeped in rum. The supply appears to be fairly plentiful, but there is no organized business of buying and exporting it. A demand for the commodity would help many of the poorer class of country people and add another industry to the list of those built upon the agricultural resources of the land.

The Bureau of Information of the Department of Agricul-

ture, 30 San Francisco street, San Juan, will undertake to get buyers in touch with a supply of the roots. It must be remembered, however, that it is a new thing and will take some little time to get a force gathering as regular work.

BANANA INDUSTRY OF COSTA RICA.

Costa Rica's shipments of bananas during 1914 were 91 times the exports in 1883 (in which year the exportation of this fruit began), and in 1915 exceeded those of the preceding twelvemonth, although exact figures are not at hand. The marvelous development of the industry (which is now the great single industry of the Republic) is indicated in the following table, compiled from the official returns of exports for the last 32 years:

Years.	Stems.	Years.	Stems.	Years.	Stems.
1883.....	110,803	1894.....	1,374,986	1905.....	7,283,000
1884.....	420,000	1895.....	1,585,817	1906.....	8,872,729
1885.....	401,183	1896.....	1,692,102	1907.....	10,166,551
1886.....	595,970	1897.....	1,965,631	1908.....	10,074,599
1887.....	889,517	1898.....	2,331,136	1909.....	9,465,690
1888.....	854,588	1899.....	2,962,771	1910.....	9,097,285
1889.....	990,898	1900.....	3,420,166	1911.....	9,309,586
1890.....	1,034,765	1901.....	3,870,156	1912.....	10,647,702
1891.....	1,133,717	1902.....	4,174,199	1913.....	11,170,812
1892.....	1,178,812	1903.....	5,139,163	1914.....	10,162,912
1893.....	1,278,647	1904.....	6,165,400		

Costa Rica holds first place among the Latin American Republics in the cultivation of this fruit. Through seed selection and better care of the soil the planters are gradually eradicating the banana disease, which made its appearance here about 10 years ago. The United States presents by far the best market for Costa Rican bananas, taking, in 1913, 8,354,722 stems out of a total of 11,170,812 stems exported.

Returns issued by the Japanese Department of Agriculture and Commerce, as reported in the Japan Gazette, show that the actual crop of rice in Japan last year was 279,571,810 bushels, the first and second estimates having been 285,031,040 and 278,505,125 bushels respectively. The crops during recent years have been as follows, in bushels: 1910, 233,166,896; 1911, 258,562,665; 1912, 251,112,545; 1913, 251,276,335; 1914, 285,031,040; 1915, 279,571,810.

Commissioner John J. Dillon, head of the New York State Department of Foods and Markets, is scheduled for a salary of \$6,000 a year, but his first year of service gave him no pay, as the state appropriation was not sufficient to cover the necessary work of carrying on the work of the department, and Commissioner Dillon paid the expenses out of his own money. This year the appropriation is large enough to spare the commissioner's salary.

The food of the child determines the future of the citizen, and the physical strength of the potential fathers and mothers of the state.

BON BON

The Original Alum Baking Powder

Never surpassed in wholesomeness, leavening or keeping qualities. Immense output. Low price.

J. C. Grant Chemical Co., E. St. Louis, Ill.

FIRELESS COOKER; hanging cabinet form; complete; 4 hole; factory to you, \$8.50.

BOOKSHELVES; sectional; mission style; 5 tiers; solid; elegant; any finish, \$3.00.

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Everybody packs and ships goods in boxes

—no distinction in that. There's a lot of distinction in the kind of boxes you use; and it's the best reason for always using



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are made by experts who know what you want. Our Art Department is not equalled. Sefton Printing Department for folding boxes is of the latest modern equipment.

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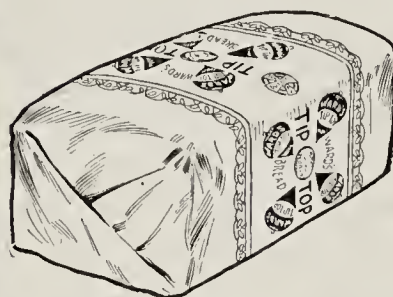
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Besides TIP-TOP there is WARD'S DAINTY-MAID and WARD'S WHEAT-HEART BREAD (the genuine whole wheat loaf) which is as appetizing as it is nutritious. These three high grade loaves are wrapped by machine in waxed paper and in quality and purity are without an equal.



It is worth while to
always ask for

**WARD'S
BREAD**

Your Advertisement

In the American Food Journal will be read by manufacturers, wholesale dealers, dairy, food, and drug officials and boards of health in every State in the Union.

15 S. Market St., CHICAGO

USEFULNESS OF THE PERSIMMON.

The only fruit, says a new publication of the United States Department of Agriculture, Farmers' Bulletin No. 685, which equals the persimmon in its value as a food is the date. Nevertheless many persons with fine persimmon trees in their possession are allowing the fruit to go to waste either through ignorance of the many uses to which it may be put or through prejudice. There is a saying in the persimmon country that persimmons are "good for dogs, hogs, and 'possums." This, however, is declared to be a gross injustice to a very valuable product.

One reason for the neglect of this fruit is the mistaken idea that persimmons are unfit to eat until they have been touched by frost. As a matter of fact much of the best fruit is lost each year because it ripens and falls to the ground where, not being touched by frost, it is left to rot. Such persimmons as are not edible before frost comes are a late variety of the fruit and the reason that they pucker the mouth is because they have not yet ripened. In general the best fruit are those that ripen just before the leaves fall.

At the present time the most common use for the fruit in the persimmon belt, which extends from Maryland, Virginia, and the Carolinas westward through Missouri and Arkansas, is as food for hogs. It can, however, be made up into a large number of very palatable products for human consumption. To be on the safe side it is well to add a half teaspoonful of baking soda to each cupful of persimmon pulp whenever the fruit is subjected to heat. This does away with all risk of astringency, the quality in unripe persimmons which produces the well known puckering of the mouth. If the fruit is perfectly ripe this precaution is not necessary, but as there is always the possibility of some green fruit finding its way into the pulp it is usually advisable.

The following recipes will be found simple and agreeable:

PERSIMMON BREAD.

1 cup of persimmon pulp, 1 cup of water, $\frac{1}{2}$ teaspoonful of soda, yeast, shortening, flour to make a stiff dough.

Set to rise, mold, and bake like other bread.

PERSIMMON CRUMPETS.

Take 1 pint of the sponge of persimmon bread which has been set over night, add one egg and enough milk to make a thin batter, set to rise for one hour, then bake on a hot griddle like griddlecakes. Serve hot with butter or sirup.

PERSIMMON GRIDDLECAKES.

1 cup of persimmon pulp, 1 egg, 1 cup of flour, 1 teaspoonful of baking powder, $\frac{1}{2}$ teaspoonful of soda, milk to make a thin batter.

Bake and serve as above.

PERSIMMON CAKE.

1 cup of persimmon pulp, $\frac{1}{2}$ cup of sugar, 1 egg, 1 cup of flour, 1 teaspoonful of baking powder, $\frac{1}{2}$ teaspoonful of soda.

Butter of size of a walnut. Bake 40 minutes in a moderate oven. For a soft pudding leave out the eggs. For a custard leave out the flour and the baking powder.

PRESERVED WHOLE PERSIMMONS.

Put a thin layer of sugar in the bottom of a jar; then a layer of whole ripe persimmons, then a layer of sugar; and so on until the jar is full. The sugar will soon dissolve and form a sirup. Press the upper fruits down under the sirup or add more sirup to the jars. Seal and store until used. The sirup may be drained off and the fruits served like dates, which they will resemble very much in both appearance and flavor.

PERSIMMON ICE CREAM.

2 cups of persimmon pulp, 1 cup of thick, sweet cream.

Beat together thoroughly and freeze like ordinary ice cream. The fruit must be thoroughly ripe and nonastringent.

PERSIMMON FUDGE.

2 cups of persimmon pulp, 2 cups of sugar.

Cook over a slow fire, stirring occasionally, until graining begins. Add 1 teaspoonful of baking soda and stir over the fire until quite stiff. Spread on buttered platter or paraffin paper.

TWO KINDS OF SUGAR.

The introduction of the use of sugar into Europe was largely due to the Crusaders, who acquired a taste for it when they were in the Holy Land. On their return home their demand for it resulted in creating a market for it in Venice.

It was not long until the sugar cane was cultivated in all the countries bordering on the Mediterranean, and the industry flourished up to the fifteenth century. After the discovery of America the Spaniards and Portuguese, and later the Dutch, French and English, introduced sugar cultivation into their colonies in the West Indies and South America.

By the introduction of slave labor, which was practically unknown in Christian countries prior to the fifteenth century, it became possible to produce sugar in large quantities, so that it ceased being a costly product used only by the rich, and became cheap enough to be an article of common consumption.

The output, which formerly amounted to only thousands of hundredweights, now increased to thousands of tons.

While it is possible to obtain sugar from the maple tree and sorghum sugars from broom corn, as well as from fruits and some of the palms, the world's supply is obtained mainly from two sources—the sugar cane and beet roots.

Cane sugar is grown entirely between 30 degrees north latitude and 20 degrees south latitude. Beet sugar is a product of the Temperate Zone, and its cultivation is confined to Europe and the United States. At present the world's supply is about equally divided between cane and beet sugar.

SUGAR MILLS TO BE IMPROVED.

For several years past the sugar mills of Porto Rico have had unsatisfactory business, but the rise in the price of sugar incident to the war has put most of the establishments firmly on their feet again. Sugar men and others in position to know expect some money to be spent on improvements this year. Many of the establishments in Porto Rico have antiquated equipment, and are not getting the proper extraction from the cane or the proper amount of sugar from the juice, and will be compelled to improve their machinery in order to keep pace with other establishments which are able to get larger returns. If manufacturers in the United States would look into the market here, the reward would be a considerable amount of business. The crop will be larger than ever before this year, and the sugar people are all optimistic regarding the outlook. This is echoed in general business conditions, of which sugar is a barometer in this country.

As a result of representations made to the Russian railway authorities by Mr. Henry D. Baker, the American commercial attache at Petrograd, permission has been granted to transport large quantities of licorice root from the Russian Caucasus to Archangel, for shipment to the United States. This will not only be a boon to American tobacco interests, but will also increase the quantity of cargo available for the return trips of vessels carrying the increasing American exports to Russia.

Special efforts are being made at the New York district offices of the Bureau of Foreign and Domestic Commerce, 409 Customhouse, to afford as complete files as possible of the trade publications containing information of value to American business men. Many of the periodicals of this class are already being received, and are made available for the visitors to the district office, especially persons from foreign countries who are interested in trade relations with American manufacturers.

Bacteria, yeasts and molds only develop in canned foods which have started to decay or decompose.

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A scientific preparation being the result of extended research by the celebrated chemist Prof. E. N. Horsford, for many years Prof. of Chemistry in Harvard University.

Dietetically speaking, Rumford is without fault; as a leavening agent it is perfect; as a keeper it has no superior.

DOES NOT CONTAIN ALUM

Its Purity is Unsurpassed.

BUY PURE COMPRESSED YEAST

The discussion about using starch in Compressed Yeast has reached the point in the United States of a decision forcing those who used it to declare the fact on the wrapper or label.

That is how we administer the Food Laws in this country.

In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

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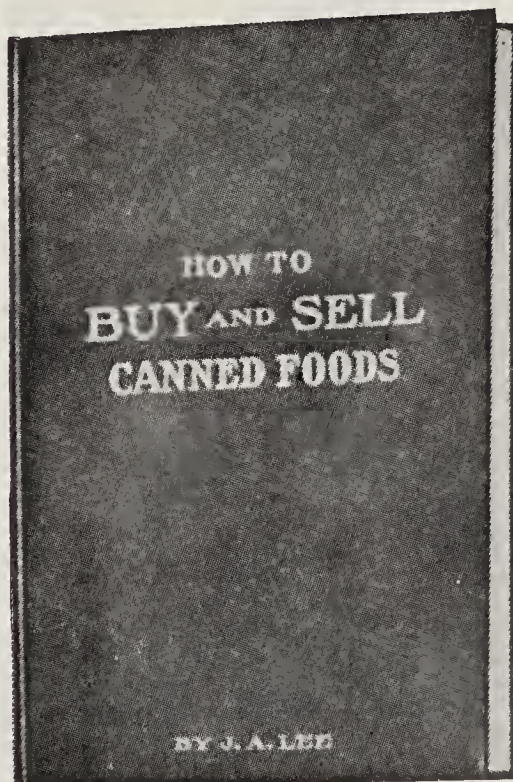
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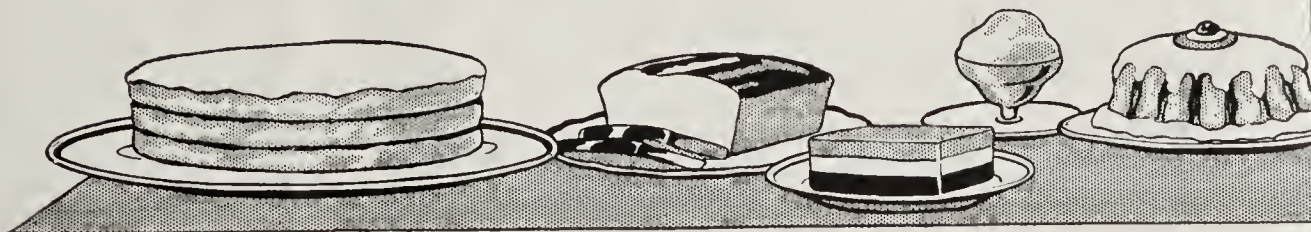
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THE AMERICAN FOOD JOURNAL

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A monthly magazine devoted to the interests of food control officials, food manufacturers and wholesale grocers.



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NOVEMBER, 1916.

Number 11.

A CHANGE OF OWNERSHIP.

Since 1901 to the present time the publisher of The American Food Journal has been closely connected with the food control movement. Beginning with the fifth annual convention of the National Association of State Dairy and Food Departments, held at Buffalo, New York, in October, 1901, he has published regularly the yearly journal of proceedings of the association, and has attended nearly every convention. The American Food Journal grew out of this connection and the apparent need of a publication of more frequent issue that could record the progress of the general movement and the activities of the several state departments. In 1905 the first number of The American Food Journal made its appearance, and the continued and increasing success of the publication is mirrored in its pages. Its subscribers are found in every state of the Union, and abroad, as well, no less than eleven foreign countries showing among the addresses on its list.

At the beginning of a new chapter in the history of this journal the brief statement above is made as a summary of untiring effort and genuine interest in an inspiring cause. Under the press of other interests I have felt it necessary to pass the work on to other hands, resourceful and capable. I have relinquished the ownership and management of The American Food Journal to Mr. Robert Gordon Gould, of Chicago, who has an intimate knowledge of the technical problems of manufacture, and, as well, of the legal aspects of food control. Mr. Gould has had editorial experience, and under his management the paper is assured a future of achievement.

Acknowledging here with sincere gratitude the encouragement and aid which have been given to me without stint through the fifteen years of labor in this field, I ask my subscribers and advertisers to give the same support to the new ownership.

HERMAN B. MEYERS.

BUTTERED HAM AND BACON.

THE dairy industry is great and powerful. It commands millions. Millions command men, but the big men in the dairy industry have not rested with the power of their money. They have long had the motto, "Put no one but dairymen on guard." This explains why in many of the states the food commissioner is a dairyman—a dairyman first, last, and all the time, and food commissioner after that—some distance after that, as a strict matter of fact.

Now the food commissioner is the public official who is supposed to enforce the laws impartially, and to see to it that all foods comply with the law. Theoretically, the food commissioner should have no special interest in any one food. If the legislature in its discretion threatens to signal out one or more foods for special regulatory attention, that fact should not, theoretically, at least, wring the withers, or, to put it in the vernacular, sting the pocket nerve of the food commissioner.

Theoretically, we said, but the dairy industry is intensely practical—put none but a dairyman on guard!—so we have the beautiful spectacle of the laws of various states solemnly reciting that it shall be the duty of the dairy commissioner, who is also the food commissioner, "to encourage the dairy industry." Some state laws provide that the food and dairy commissioner shall be a "practical" dairyman. Just what the legislatures had in mind by those words may be a matter of discussion for the theorist, but it has no ambiguity in the eyes of the dairy organizations. To them it means that the food commissioner is directed by law to give 50 per cent the best of it to dairy products. So it is not a matter of wonder that when dairymen like Barney of Iowa, and Newman of Illinois, have all foods under their control, perhaps, even with the best of intentions, it may be difficult for them to

hold the scales even in any matter where the sacred cow is involved.

There is an old story about the dairyman who put green spectacles on his cow and then fed the poor beast white wood shavings. The story is mythical surely, for no true dairyman would so treat his faithful cow. We prefer to believe that the dairyman was a food commissioner; that the spectacles were yellow and not green; that he put them on himself and not on the cow, looked at the butter-oleomargarine question, and then gave a decision on an entirely different question, which clearly reflected the color which appeared through his yellow spectacles.

The foregoing observations are induced by the fact that Dairyman Barney of Iowa has jumped head-first into the wrapped ham and bacon matter. During October, in his capacity of food commissioner, he held a hearing on the subject, and called on the packers to show cause why they should not mark the net weight on meats covered for sanitary reasons with gelatine paper or cheese-cloth. Now it is well to remember that Newman of Illinois staged a similar hearing several months ago. Newman is only assistant commissioner, it is true, and Me-too Matthews presided at the hearing, but everyone who knows food control work well knew it was the hand of Esau but the voice of Jacob. Some little Jacob, Newman is, and Matthews is a good fellow who knows his way down political lanes but in food matters he is ignorant, and in the past four years he has nearly lost his voice saying "that's good" to Newman's suggestions. Well, why shouldn't Newman and Barney hold hearings on hams and bacon? There is no reason in the world, and if covered ham and bacon are required by law to be marked with the net weight, Newman and Barney should see to it that they are so marked; but it so happens that every court of justice which has passed on the question has held that, under the law, covered hams and bacon are not required to be marked with the net weight. The laws of Iowa and of Illinois are identical in this respect with the United States law, and the U. S. Government officials have also decided that covered hams and bacon are not required to be marked with the net weight.

Why should Barney of Iowa, whose law is the same as the national law, and who, in all the years he has been commissioner, has never failed to follow the national rulings, make an exception of hams and bacon?

Why should Newman, and Me-too Matthews, whose law is identical with the national law and who have always followed the national rulings, try to make an exception of hams and bacon, until restrained by the fair and just chief executive of the state? Particularly, why should they display such zeal regarding hams and bacon, when it is a fact which stinks to high heaven in the city of Chicago, right under the classic probosci of Matthews and Newman, that many, many foods admittedly in package form, and undeniably required by law to be marked with the net weight, are openly and brazenly sold without such markings, and short weight at that?

Is it possible that the answers to the foregoing questions may be found in the fact that Barney and Newman are dairymen, whose duty it is "to encourage the dairy industry," while hams and bacon are the property of an industry which manufactures oleomargarine, a product which competes with butter? Does the fact that the Congress of the United States has threatened

to pass a law requiring the same inspection for butter as for oleomargarine, and the oleomargarine manufacturers are supposed to favor adequate inspection of all foods, including butter, explain the zealous activities of these dairymen who hold official positions?

Any fair-minded food official will, it would seem, agree with the position of the AMERICAN FOOD JOURNAL on the question of marking hams and bacon with the net weight. If any court of competent jurisdiction decides these products should be so marked, then let the food official insist on such marking with all the power of the state whose servant he is. But with all the courts and all the law officers who have so far passed upon the question holding that the law requires no such thing, it is grossly unfair to make the question a football in the butter-oleo fight.

Food commissioners should hold the scales of justice in even balance, in accordance with the weight of judicial authority, even if their sympathies or their private business interests incline them towards one side or the other. Do not try to butter hams and bacon.

"DANGERS" AND "FACTS."

IN ANOTHER department of this paper appears a government report on the canning industry, giving the statistics of output, number of canning plants and their employes, and amount of capital invested. The figures will surprise many readers, who have had no exact knowledge of the subject. By a Census Bureau valuation the output in 1914 is set down as more than \$258,000,000. When it is considered that this vast amount represents, to a large extent, the saving of perishable food products that would otherwise go to waste, the importance and value of the canning industry are impressed on all minds. Yet in what degree the necessities of life, not otherwise available, are furnished by this modern scientific application of inventive genius and commercial enterprise few completely understand and appreciate.

Canned foods are eaten everywhere in the civilized world. They are served as frequently by the chef who draws a salary of \$10,000 a year as by the housekeeper and cook whose only reward is a share in the joys and sorrows of the home. They prove their excellence and wholesomeness on a million tables every day.

This great industry has been built up slowly and solidly, advancing only as it met actual needs in a thoroughly satisfactory way. It has met and conquered many disadvantages, and it prepares itself with wisdom and care for the disasters that the unconquerable forces of nature bring in some regions every year. It tides over the seasons of small harvests and meagre supplies, but only by shrewd calculation and the massing of resources. It meets and stems effectually a flood of smaller evils.

Last month THE AMERICAN FOOD JOURNAL printed an eight-line paragraph which noted the report that the National Cannery Association expect to prove through scientific investigation that ptomaine poisoning from canned foods is impossible. A research committee has been appointed and it is estimated that \$30,000 will be required to carry on the work three years. That there is a seeming necessity for this action is demonstrated by the following letter, which is printed here as a statement of the common misunderstanding:

New York, October 18, 1916.

Editor, AMERICAN FOOD JOURNAL,
Chicago, Ill.

Dear Sir: I was interested in reading in your October issue the article on page 506 with the caption, "No Ptomaine Poisoning from Canned Goods."

The above statement appears quite frequently in newspapers and I do not blame the canners for protecting their interests. The facts in the case, however, are as follows:

Canned food, when properly sterilized and hermetically sealed, will keep, comparatively, indefinitely. It has been proven scientifically, however, that when the can is opened the contents readily deteriorate, and where the contents contain meat they deteriorate more readily than when the contents consist entirely of vegetable matter.

In the New York *Mail* of October 16th, there is a dispatch from London as follows: "According to travelers from Germany," says the Exchange Telegraph's Amsterdam correspondent, "a remarkable disease is spreading in many parts of Germany, especially in Berlin, Hamburg, Munich and Cologne, caused by continual feeding from preserved foods. The sickness is described as 'tin sickness.' It is considered a serious form of blood poison. Thousands of cases are reported in every large city, although the authorities exercise strict control over the tin used for preserved foods."

In the Journal of the American Medical Association, September 30, 1916, page 1040, is the following:

"Dr. George H. Curfman, Salida: Up to recent times the reports of outbreaks of botulism were confined to meat as a source of poisoning. For a century it has been understood that improper pickling or canning of meats was essential for the production of disease. In the Darmstadt outbreak in 1904, in which the poisoning occurred in a cooking school, twenty-one became ill after eating bean salad. Of this number eleven died. Landmann believed that the bacillus botulinus had been carried into the can along with some little pieces of leftover meat, which might readily be found in any kitchen. It was also suggested that the spores of the organism were carried in on the beans from the fields. In this country all or nearly all the reported outbreaks have been due to canned goods. All of the reported outbreaks have occurred on the Pacific Coast, with the exception of one in Boston, in which the source of poisoning was thought to be minced chicken.

"Meats, especially liable to botulinus infection, such as sausage, salt pork, and preserved meats, should never be eaten uncooked. Meats presenting a rancid butyric acid-like odor should be destroyed. The brine used in corning meats should contain at least 10 per cent of salt, as the organism cannot develop in such a solution. Particular attention should be paid to sausage casings, to see that they are free from fecal masses and that they have been carefully cleaned with some antiseptic solution prior to use."

The above indicates that there is danger in consuming canned foods. The canner does all that is possible when he prepares canned foods

hygienically and scientifically, and such canned goods generally reach the consumer in good condition. Occasionally there are springs and swells, not very often, however. The springs and swells nevertheless indicate that there are poisonous gases in canned foods.

When canned goods are consumed an hour or so after the can is opened the contents of the can do not have time to deteriorate. If, however, such canned foods are permitted to stand around in a warm temperature, fermentation readily forms and such food then becomes unfit for human consumption.

Yours respectfully,

H. L. HARRIS.

The phrase, "common misunderstanding," was used in this application—the "facts" stated are not threatening; the reports of unknown travelers on a rumored sickness are not entitled to classification as "facts." "Reported outbreaks," confined to a comparatively small section of the population of this great country, may well be questioned and decision reserved until a scientific investigation has brought out the "facts." With all due respect for the knowledge of this correspondent, it is submitted that he has not established the accuracy of his dictum that "there is danger in consuming canned foods." It could quite as well be asserted that the public is menaced by the "danger" in going down stairs, or in crossing a street. More people have been killed by falling out of windows during the past year than have been "reported" as ill from eating canned foods.

Here is a letter printed in New York the same day the communication of Mr. Harris was mailed to this paper:

New York, October 18, 1916.

Editor of The Journal of Commerce and Commercial Bulletin:

Sir: A news item coming via Amsterdam is going the rounds of the daily press telling about a mysterious sickness in Germany, said to be the result of eating preserved foods. The name of the disease is given as tin sickness. News of this sort if left uncontradicted is apt to hurt seriously the interests of the canned food industries of the world. It is of course impossible to question flatly the truth of the report, as all direct news from Germany fails since several months. Never, however, has the canned industry of the world proved its value more than now. Not only are the armies of Germany relying largely on canned foods, but our large exports of canned foodstuffs to England, France and other Allied markets show that the Allies are also making considerable use of canned foods.

Germany also has been enabled by her canning industry to carry forward part of her surplus production of fruits and animal foodstuffs into the lean season and in fact has solved part of her very difficult food problem by an extensive recourse to canned foods. The use of canned foods, however, is not at all new. During the spring of 1915 the population was already advised to make a larger use of canned foods and also to preserve as much of the existing surplus as possible. So if any danger to the national health has resulted from the use of canned food this most likely would have already shown during the last year.

Nothing, however, so far has been reported. It appears, therefore, that this piece of news has to be classified amongst the frequent and also very unreliable reports about ptomaine poisoning after eating canned food which here and there appear in the press. The experience of many years shows that there is no danger of any sort in the consumption of foodstuffs preserved in tin cans. If such cases of poisoning have actually happened in Germany, it is much more likely that they are the result of careless handling of opened tins, but not of eating canned foodstuffs.

It is only fair to the canned food industry that this be stated.

LUDWIG W. SCHMIDT.

So much for the "tin sickness." Now, for the graver charge of ptomaine poisoning, just a sentence. Were there any instances known where ptomaine poisoning from canned food was proved beyond the possibility of doubt, the research committee of the National Canners' Association need not have been appointed, and the expenditure of \$30,000 could well be saved. The canners have never found such instances, and they will take up "reported" instances for the purpose of bringing out the facts.

Any disinterested observer, possessed of a general knowledge of conditions in the canning industry—the attention given to scientific sanitary methods, the supervision of public food control officials, and, greatest of all, the absolute dependence of the entire industry on sustaining a reputation for producing wholesome products—it would seem could not hesitate in deciding that canned foods are not merely good foods, but much more certain to be free from dangers to health than are the table supplies prepared in thousands of household and restaurant kitchens throughout the country, where sanitary conditions are neglected.

BUTTERMAKERS BEGIN TO SEE LIGHT.

FOR years THE AMERICAN FOOD JOURNAL has advocated the pasteurization of cream used in the manufacture of creamery butter, as a just and necessary protection against the germs of tuberculosis from infected cows. That advocacy has made enemies of many creamery men who were unable to read the signs of modern progress, and even of dairy and food commissioners who thought they were befriending the butter men by opposing a reform which entailed some expense and greater care.

In spite of enmity and opposition, this journal continued its fight for pasteurization, and the greatest pressure from organized interests never caused it to weaken in its efforts for "a healthful product, which means a pasteurized product." It has spoken its mind when shifty methods in conventions have stifled a full and free discussion of the subject. It has spared no official of state authority or of local organization when that official attempted to bar the adoption of this much needed regulation. It has fought earnestly, consistently, and fairly for this movement to guard the health of the public, because it believed the cause was important and vital.

Many have believed that these efforts were futile but they took counsel of their hope rather than of their reason. A strong public sentiment in favor of the reform has been created and that sentiment is rapidly crystallizing in action. Publications that repre-

sent the creamery interests and the butter trade were antagonistic without exception in the beginning. Now it seems remarkably curious that they could not see the movement was really in the interest of the industry.

Butter is a part of every meal served at every table. No food product is more widely distributed and more generally consumed. Should it carry disease germs—and it is a perfect germ carrier—no home can be guarded against the danger of infection. That danger is recognized and feared, and the result is a check on butter consumption. Were all creamery butter made of pasteurized cream, not only would the public health be safe-guarded, but the consumption of butter would increase and the markets operate under more favorable conditions.

The time is coming when pasteurization will be required by law. Progressive journals in the butter trade realize that the battle has gone against them, and they are accepting the inevitable. Here is an editorial article from Chicago Dairy Produce, printed in its issue of October 10, 1916, under the heading, "Campaign for Improvement":

Before the annual meetings of the co-operative creameries begin, the buttermakers should commence an educational campaign regarding the requirements of a creamery to meet the demands of the consuming public. It should be shown to the directors of the creameries that the consumers are becoming more and more critical each year. While consumers are losing their taste for the real high aroma in butter, for the simple reason that they haven't seen any of that kind of butter for so long that they have forgotten what it is, they do want a clean, sweet piece of butter without objectionable taste or odor. They are insisting more strongly each year on having a healthful product, which means a pasteurized product. It means a starter. It means clean utensils, even to the can in which the cream is delivered, with the tin worn off. It means clean and sanitary creameries with nothing to produce bad odors; and, above all, it means a good, clean, sweet cream from the farmers themselves as their part in the production of the butter.

To obtain all of these things from the boards of directors is the object of the campaign. The buttermakers should start right now, and they must do this by educating the patrons of the creameries who elect the boards of directors.

We will confess that market conditions during the past year have not furnished much of an incentive to work for a higher quality of butter; but these conditions are largely a result of a shortage in Europe which has created a great demand for our butter, and the range of prices between the best and the poorest has been narrow; but sooner or later the European situation will change.

It must be remembered that by far the greater part of the finest butter never comes on the open market, and no record is made of the prices it brings; and, in fact, in a majority of cases no one but the creamery managers and the receivers of the butter know these prices. This is the class of creameries that all the buttermakers should aim to get into, but they never can do it with all the things we have enumerated working against them. They never can get the necessary equipment un-

less they show the "powers that be" in their creameries the necessity for having them.

In the paragraphs quoted above are some of the arguments which have been printed again and again by THE AMERICAN FOOD JOURNAL. At last they are accepted and endorsed by a paper which has fought against them for years.

From the Creamery Journal, of Waterloo, Iowa, issued under date of October 15, 1916, the following editorial utterance, headed "Pasteurization to Come," is presented as additional evidence that the creamery men are seeing the light:

Although the resolution putting the members of the Iowa State Dairy Association on record as favoring compulsory pasteurization of dairy products received little or no attention at the time, even by those in attendance at the meeting, it is something which is deserving of serious thought on the part of all concerned.

Pasteurization is sure to come sooner or later and it is well for the creamerymen to prepare themselves for it. But it is doubtful even in those states where associations have put themselves on record as has the Iowa association, whether all the members really appreciate the importance of the movement. They do not seem to realize that, should their action result in the passage of a state law to that effect, they will be forced to pasteurize or suffer a penalty just as much as though they were caught with high moisture.

No state dairy commissioner wishes to stand in favor of a law of this kind while a large number of the creameries are still unprepared for it. But this is just what is liable to happen. The creameries go on record as being favorable to such a law, the law is passed, and then some of the very men who voted in favor of the measure cry out that they are not prepared to comply with such a law.

Let the creamery men give this question serious thought. Pasteurization is certain to come and it would be better for the creameries to start it of their own volition; but if they do not start before such a law is passed let them at least give the subject their serious consideration. More important still—if they have anything to say upon the subject, now is the time to do it either through the creamery papers or their state dairy commissioners. The creameryman who cries out against such a law after it is passed will be liable to receive little consideration.

And all this in spite of the fact that a year ago or a little more a resolution favoring pasteurization was voted down in a convention of Wisconsin butter-makers. In spite of the fact that butter interests were able to smother a pasteurization resolution offered before the recent convention of dairy and food officials in Detroit, the question cannot be killed or longer ignored. "Pasteurization is certain to come" Consumers "are insisting more strongly each year on having a healthful product, which means a pasteurized product."

The battle is nearly over, and THE AMERICAN FOOD JOURNAL plumes itself on the part it has taken in the conflict. It led the forces which will soon celebrate a great victory for health.

SUBSIDIZING THE JOBBER'S SALESMAN.

MANY a salesman who could not be bribed with an offer of money to give special service to one of the several manufacturers whose goods are sold by his employer, the jobber, is tempted when he is told by the manufacturer that an automobile will be furnished him under certain conditions.

This plan of subsidizing salesmen has been put in practice to such an extent that the Bulletin of the National Wholesale Grocers' Association takes notice of it and protests against its evil effects. The remedy suggested—that the jobber refuse to furnish names of his salesmen to manufacturers—does not appear to hold out any notable promise. A manufacturer who considers this information of value great enough to follow it up with the gift of an automobile will surely find a way of learning the names of the salesmen.

The orders turned in by the salesman make a record that is easily checked, and evidence of favoritism for any manufacturer could not be hidden for any length of time from an employer who watches his business closely. Eternal vigilance, and good methods of bookkeeping, will bar temptation from the salesman. Every jobber may know what his salesmen are doing for the manufacturers, without any outside detective work.

Columbus (Ohio) inventors are putting on the market a sanitary metal window-refrigerator, designed to replace the window-box in common use in the tenement districts of cities for the temporary storage of foods. There is need for such an article, in the interest of public health, and it is to be hoped that the manufacturers will be able to meet the demand.

More than twenty-four billion cans were made in the United States last year, to supply the demand of canners of food products. The price of steel and tin plate has advanced nearly 100 per cent during the past few months, and as a consequence canned food manufacturers are meeting a heavier tax in operating than ever before. It is not difficult to find reflections of this condition in the prices of canned foods this season.

Bert M. Fernald was nominated at the primaries in Maine as candidate for United States Senator on the Republican ticket. Mr. Fernald is known as one of the leading canners of the country, ex-president of the National Canners' Association, but this is not his first essay in the field of politics, as he has been governor of his state.

Fishing laws of North Carolina are said by the U. S. Fisheries Commission to be the best that have ever been framed by a state. State Fish Commissioner H. L. Gibbs adds to this commendation the statement that the laws are generally obeyed.

A New York business man recently distributed \$15,000 among his employees and disclosed to them that when he came to this country from Austria thirty years ago as an immigrant he had only 19 cents and with this successfully started business.

Many sufferers from digestive troubles—headache, nausea, colic and diarrhea after eating—owe their ailments to tainted foods.

RECENT PUBLICATIONS.

Stock Feeding Stuffs Analyzed and Described.

From Pennsylvania comes a state report which is of notable value and interest to feeders of horses, cattle, hogs, and poultry, and to the manufacturers of stock feeding stuffs. It is a volume of 275 pages, made up, for much the greater part, of tables which show the constituent elements of samples examined. No less than 778 proprietary and miscellaneous mixed feeds are reported on, with every detail necessary for a complete understanding of the nature and value of the commodity. The bulletin covers a year's work of Chief Chemist James W. Kellogg and his assistants, and the results are commendable from every point of view. It is doubtful if the edition printed is large enough to supply the host of breeders and producers of feeding stuffs who should possess the book, and an early application is suggested. The volume is entitled Bulletin No. 280, Feeding Stuffs Report, 1915.

Published by direction of Charles E. Patton, secretary of agriculture, Commonwealth of Pennsylvania, Harrisburg.

The Making of American Cane Sugar.

Joseph E. Freeman, secretary of the American Sugar Refining Company, has written concisely yet entertainingly the history of sugar refining in this country, and the company which he serves so efficiently has published the little essay in an artistic form, illustrated with ten remarkably fine engravings. The book is entitled "A Century of Sugar Refining in the United States," and its contents will win more than casual examination from any reader into whose hands it may come.

Sugar was a luxury a hundred years ago, and granulated sugar was unknown. The cost of refining sugar in 1816 was more than the price of refined sugar today. About nine million pounds of sugar was refined in New York City during the year 1816, while at the present time the American Sugar Refining Company can refine that quantity in forty-eight hours. The changes and improvements in the process of refining are described by Mr. Freeman, and many important details of the great business built up by the company are explained and made clear by the illustrations.

Published by the American Sugar Refining Company, New York City.

Meat Packers' Convention Number.

The National Provisioner of October 14, 1916, is a fine issue of that notably well-informed, well-written, and well-printed weekly. It is expanded to 172 pages to give room for an admirable report of the annual convention of the American Meat Packers' Convention, and special efforts in nearly all the other departments of the paper. The convention report is full, and speakingly illustrated with more than thirty portraits of prominent members of the association. That the work of the editor and business manager is known and appreciated in the trade is made evident by the fact that the issue carries more than a hundred pages of advertising from leading houses.

Published by the Food Trade Publishing Co., 116 Nassau St., New York City; \$3 a year.

A Missionary for Michigan Interests.

With its issue for October 25, 1916, the Michigan Tradesman entered its thirty-fourth year of usefulness and prosperity. Editor E. A. Stowe established his paper in Grand Rapids in 1883, and in the third of a century in which it has illuminated the routes of good business there have been no changes in its ownership, editorship, or business management. The Tradesman was one of the pioneers in the field of trade journalism, and it has always been an able, clean, and influential paper. The number which celebrates the thirty-third anniversary of its birth presents a hundred pages, filled with original articles contributed by prominent business men, the usual wise and courageous editorials, much interesting correspondence, and the trade announcements of many Michigan houses that are known nationally.

Published by Tradesman Company, Grand Rapids, Mich.; \$1 a year.

Railway Credits and Conditions.

At the twenty-third annual convention of the National Hay Association, held at Cedar Point, Ohio, July 12, 1916, Frank Trumbull, chairman of the Railway Executives' Committee, made an address entitled "Railway Regulation and Locomotor Ataxia." Its interest and value prompted the movement to preserve the essay, and it is now available in pamphlet form. It is faint praise to say that Mr. Trumbull presents an array of facts and figures that may well arrest the attention of business men everywhere, and in a few pages makes an argument that cannot be ignored by thinking men. He is to be congratulated that his audience is now increased by the use of printers' ink to a fairer measure of the importance of his subject.

Published for the author, at 61 Broadway, New York City.

Purifying Water of Swimming Pools.

From the Bureau of Science of the Philippine Government, Manila, comes a brochure entitled "Bacteriological Examinations of Swimming Pools in Manila," which is admirable in matter and manner. Charles E. Gabel, of the Biological Laboratory of the Bureau, is the author, and his report of a long series of tests and experiences is of interest and value. Prof. Gabel's work was painstaking and thorough, as shown by the several analytical tables, and his conclusions are well sustained. Calcium hypochlorite, added daily in amounts equivalent to 0.5 part chlorine per million parts of water, is recommended as the best and most economical means of disinfection of swimming pools.

Volume XI, No. 2, Section B, Tropical Medicine, March, 1916.

First Rice Train to Cross Continent.

Chinese rice was shipped across the American continent for the first time the other day. A trainload of thirty cars was made up at Seattle and Tacoma to go via the Union Pacific system to New Orleans where it will be shipped to Cuba. The load was valued at about \$42,000.

The shipment of the cargo across the United States by rail is an extraordinary thing. The routing ordinarily would have been through the Panama Canal. The dearth of ocean tonnage made this impossible, however. Banana ships plying across the Gulf of Mexico are plentiful and the shipment has been booked clear through to its destination. The cost of rail transportation across the continent in ordinary times would make such a routing out of the question.

Watch for Bands On Wild Ducks.

If you kill or capture a wild duck bearing an aluminum band around one leg, having a number on one side, and on the other a statement requesting that the U. S. Department of Agriculture, or the Biological Survey, be notified, you are requested to send this band at once to the Bureau of Biological Survey, U. S. Department of Agriculture, Washington, D. C. This band, if accompanied by a statement as to date, place, and circumstances under which the bird was taken, will be of service to the Survey in its efforts to determine the longevity of individual ducks and the routes of migration of the species. The bands are being attached to considerable numbers of wild duck of several species, which have been cured of the duck sickness prevalent around Great Salt Lake, Utah, and there released. The Department is particularly anxious to secure reports from these birds to determine their complete recovery from this malady which has killed hundreds of thousands of ducks in Utah.

Every dollar that a manufacturer saves on his cost of maintenance or production represents interest for one year at 6 per cent on a capital of \$16.66. Figured on this basis it is obvious that any economy that eliminates a needless expenditure may have a direct and important bearing on the balance of a business. A saving of even a dollar a day upon some apparently trifling detail may affect the theoretical value of the stock of a company over \$6,000—a sum that is not to be lightly considered by even a large concern.—Edward Mott Wooley.

The Advertiser Should Be Given a Square Deal

Truman A. De Weese, in an Address Before the Advertising Association of Chicago, Calls Attention to a Journalistic Failing

SOME years ago the editor of a paper in Emporia, Kansas, wrote an editorial entitled "What's the Matter with Kansas?" The next morning William Allen White found himself famous. Several persons have asked the question, "What's the Matter with Advertising?" without becoming famous. The fellow who answers it satisfactorily, completely, and adequately is the one who will become famous. There is nothing the matter with advertising. It is the greatest power in merchandising today—greater than it ever was in the history of trade.

But I am going to point out two evils that threaten the security and permanency of advertising: first, the tendency of newspapers to destroy what the advertising columns are trying to build up. The editorial department of most newspapers seem to be obsessed with the idea that all productive industries are organized to absorb inordinate profits from the public. The reporters eagerly grab news that tends to distort facts about manufacturers. They greatly amplify and elaborate news that tends to impugn the honesty of corporations. Occasionally an editorial writer prints a scathing indictment of a national advertiser, and then the business manager accepts money from the national advertiser to advertise his products in another column of the same paper. A glaring inconsistency of this kind would be grotesquely ridiculous in almost any other business, but in the practice of journalism it is excused under journalistic ethics.

Advertising should be truthful and optimistic. I wish the news columns of all the newspapers were as truthful and optimistic as the advertising columns. A single, unrestrained spasm of reportorial imagination has been known to damage the business of a national advertiser beyond all reparation. The reporter did not write the story with malice aforethought. His purpose was not to defame or destroy. He merely wanted to print a racy, readable news story, and as he knows nothing about the business end of the newspaper or the sources of its revenue, he is not to be condemned for exercising his journalistic talents.

I have seen a newspaper depict in graphic style unsupported allegations of unfair business practice against manufacturers on one page, and then print the paid advertisement of that manufacturer on another page of the same paper. There ought to be a better understanding and a closer co-operation between the editorial and the business department of a newspaper.

A year or so ago three chaps bought an old shanty in a certain town in New York, and proceeded to install machinery for manufacturing a close imitation of Shredded Wheat Biscuit. Our company paid no attention to them until they found some of the product on the shelves of a jobber in Connecticut. We then brought suit against them in the United States District Court. The bringing of this suit was naturally given wide publicity in the grocery trade papers, which resulted in closing the channels of distribution against the imitation product. The factory closed down. While we were collecting evidence to be used in our suit in the United States District Court these fellows, as an act of retaliation and reprisal, filed a complaint with the Federal Trade Commission in Washington, alleging that we had "destroyed their business." A reporter for the Associated Press in Washington, who was nosing around for news, got hold of this complaint and he naturally thought he had a big, sensational news item, so he put it on the wire in his own peculiar way, and when it appeared in the newspapers the next day, about fifty million people quickly got the impression that the Federal government was after the Shredded Wheat Company—that our company was a bunch of criminals and ought to be in the penitentiary. This was not the impression the reporter intended to create, neither was it his

purpose to damage our company. He merely got hold of a piece of news, and not having any information as to the other side of the story, and knowing nothing about the suit in the United States District Court, he printed it in such a way as to play us up as a lot of corporation malefactors trying to drive some poor, honest, industrious manufacturers out of business.

No honest manufacturer or merchant asks or expects journalistic clemency or protection for fraud or honest trade methods. All that a sensible manufacturer asks is that newspapers which receive a certain portion of his profits shall not go out of their way to cast aspersions upon his product or create false impressions regarding his business methods. The owner of a newspaper should permit nothing to appear in its columns that will hold up the product of any advertiser to ridicule or that tends to sow seeds of distrust or suspicion in the public mind. Surely no reputable lawyer would accept money from a client and then devote his talents to concocting sinister devices for destroying his business. If a newspaper does not approve of the business methods of an advertiser or has a suspicion as to the integrity or quality of the product, it should not accept its advertising. Having accepted it, the editorial department should be prohibited from exercising its rhetorical cleverness by casting the stigma of distrust upon the product of the advertiser.

The newspaper has in its power to destroy by a single reportorial inadvertence that which has cost millions of dollars and years of labor to build up. In every well-managed newspaper office there ought to be on each editorial and reportorial desk every day a list of advertisers in that newspaper, and the writers should be taught that the newspaper is a business enterprise and is not conducted as a censor of public morals or a regulator of business conduct. The newspaper should be constructive, and not destructive.

The other evil that threatens to undermine the whole structure of advertising by destroying its legitimate fruits is the evil of substitution. By this I mean the goods offered by the retailer as a substitute of the article which the customer has asked for. There will always be substitution in retail merchandising. In the drug business there is more substitution than in any other form of merchandising, for the reason that almost every pharmacist can prepare from formulas a remedy for almost every kind of ailment. I am referring more particularly to that form of insidious piracy whereby a manufacturer puts out a close imitation of a nationally advertised product and actually seeks to do business on the advertising and good-will of the advertiser. When a man spends millions of dollars to educate people to use his product he creates a reputation and a good-will asset which is his property. It is just as much his property as though it were a tangible, concrete proposition. The government protects him with letters patent, but when the patent expires it withdraws its protection and takes no account of the millions of dollars he has invested in promotional work.

Congress has made an effort from time to time to prevent this form of piracy, but the newspapers have a greater power to stamp out this form of merchandising larceny than has the government, if they would only exercise it. The newspapers are the only advertising media that have any influence with Congress. Their support in most instances is essential to success. No sane politician invites their opposition.

When a corporation spends twelve million dollars to create a consumer demand for a specialty, and most of that is spent in the newspapers, may not the manufacturer reasonably ask the newspapers to protect him against pirates? It is true the government protects a product through letters patent for seventeen years. Under that protection the manu-

facturer goes ahead and spends millions to educate people to his commodity. In seventeen years the patent expires. It is the theory of the patent law that the invention should revert to the people—not to manufacturing pirates. The question arises, should the property the manufacturer has created through this advertising, in the shape of reputation and good-will, be filched from him by some one who has no intention of creating any demand for a distinctive product and who has no intention of spending any money in advertising?

A man of the name of O'Sullivan spent millions of dollars educating the people to walk on rubber heels. Having accomplished this seemingly impossible task, the market was soon flooded with cheap imitations put out by manufacturers who are endeavoring to do business on the strength of O'Sullivan's advertising and who have no intention of spending a dollar in promotional work of any kind.

The Clayton Act and the Federal Trade Commission represent attempts on the part of the government to meet this situation, but they are totally inadequate. When a man puts out a pioneer product is he entitled to any protection after the patent expires? A patent is of no value unless the people can be educated to use the patented article. This education costs money. The stockholders of the Eastman Kodak Company would never get any dividends from the business if millions had not been spent in advertising. This advertising was pioneer work. It had to "put over" something entirely new. It had to inoculate the human mind with a desire to make pictures, and then it had to convince the public that it could make pictures just as easily as a photographer. This cost a lot of money. George Eastman was willing to take a chance. He got hold of other men who were willing to take a chance. That humanity could be coaxed to go outdoors and snap at pictures with a real camera looked like a pipe-dream, but advertising "put it over," and incidentally it put Rochester on the map. The patents did not cost much—you can get a patent for \$75—but the education of the people regarding the delights of outdoor photography and the perfect ease and simplicity cost millions of dollars.

The time is coming when the government will have to meet this situation with federal legislation or else advertising is doomed. A man must have some guaranty that he will be protected in his enjoyment of the fruit of his advertising. We must have some assurance that the property created by investing millions of dollars in advertising will not be filched in a night.

The newspapers are the great media for intensive advertising. Other media may give national fame to a product, but the newspaper must move the goods off the shelves. The newspaper carries the message of the advertiser into the homes of people every morning and every night. The newspaper sustains a relation to the home and the distributor the belongs to no other medium. It is the most potential factor in the moulding of public sentiment which crystallizes in legislation. Newspapers have weight in the councils of government. Advertising is their chief revenue.

They are in a position to secure federal legislation that will protect the advertiser from merchandising buccaneers who would do business on the good-will the advertiser has created. It is for the newspapers to wipe out the evils of substitution and other forms of merchandising piracy. Will they do it?

Accuracy of Government Estimate.

Now that the checking up has been completed the Government estimate of rice production for last year has been found to be most remarkably accurate, says the *Rice Journal*. The Government's final estimate was 28,947,000 bushels, and the checking up process brought out 28,995,213 bushels, or an excess over the Government estimate of 48,213 bushels—or about two-tenths of one per cent. There was a great deal of criticism directed against the Government at the time the final figures were made public, but checking up process proved their approximate accuracy without room for further argument.

TUBERCLE BACILLI IN BUTTER.

Dr. Chas. F. Whitney, of the Vermont State Laboratory, writes as follows in the September, 1916, issue of the Quarterly Bulletin of the Vermont State Board of Health:

The bacillus which causes tuberculosis when present in milk will rise with the cream and settle with the sediment so that, whether cream is obtained by gravity or separator methods, the skim milk will contain relatively few of the germs, most of them being carried by the small fat globules into the cream or be found in the sediment. So long as this is true we would expect to find tubercle bacilli in butter, and the large amount of investigation along this line shows this to be correct. Different workers have found them in various percentages of butter examined, up to as high as 20 per cent. Salt is the only ingredient that has any germicidal effect and this is quite weak, so that butter that has been kept over three months will still contain living tubercle bacilli. Sunlight quickly kills the bacteria and drying destroys them in time, but we find the very opposite environment to hold in butter. We have therefore in butter nothing to destroy the germs except age and the slight effect that salt may have.

While there is no doubt concerning the cause of tuberculosis, there is still a question concerning the route by which the organism enters the body and how long it may remain there before evident disease begins. The large number of deaths which occur annually from tuberculosis, and the great amount of suffering during the slow progress while the victim is wasting away, make it the most terrible of all diseases and nothing should be allowed to continue which by any possibility may be a cause. The theory that the germs which are inhaled and entering the lungs with the air are always the cause, has to a large extent given way to the theory that the disease is produced by the germs entering the intestinal tract and from there infecting the glands in the neighborhood, causing glandular tuberculosis, or passing on through the fluids of the body lodge in some other focus ready, when the person becomes run-down from some cause, to break out into an active process, which in the majority of cases is tuberculosis of the lungs. Or, if the person is strong the focus begun will be destroyed, leaving only a bit of scar tissue. If the latter theory is correct, and many believe it to be, we must blame only ourselves if we daily ingest a food known to contain the living virulent germs of tuberculosis.

The people of the country as we all know are at the present time very much aroused over the conditions existing in dairy products. This has been directed largely to the milk problem, but of late they are insisting that butter come from pure, clean and safe milk. If the dairy men do not see the hand-writing on the wall and act accordingly before long, certain demands are bound to be made which it will be hard to carry out if not prepared.

Colorado Apples Now True to Name.

Government officials have notified shippers of Colorado apples that hereafter an apple must be branded for exactly what it is. As a result, the Colorado Beauty, an apple long famous in the East for its fine color and flavor, will die a natural death. It is nothing more or less than a plain everyday Ben Davis. The Black Ben, another Colorado apple famous for its color and flavor, has also been consigned to the "junk heap." It is a Gano. There are other names under which Grand Valley and Western slope apples have been shipped that will be heard no more. Although Colorado has quite a reputation, built on the fancy names it gives its apples, even though the parent tree was a Ben Davis, it is not believed that the order of the Government will affect the markets in the slightest, for the apples are just as highly flavored and beautifully colored as they were when shipped by fancy names.

Florida Will Sell Corn For First Time.

For the first time in history, Florida is to become a grain-exporting state this fall. The corn crop of Florida this year is larger than ever before. From the crop reports it is believed that several thousands of bushels of corn will be sent north and east.

Confectioners Win Important Violation Issue

Judge McConnell in Pennsylvania Court of Quarter Sessions
Gives Decision Against the Food Commissioner in Test Case

FOR several years confectioners in Pennsylvania have been hampered by unsettled conditions in connection with the food officials of the state, especially affecting the sale of candy glazed with lac. This glaze, by the way, is not shellac, as the casual reader might assume, but a very different preparation. The state officials made no claim that the glaze was injurious to health, but charged violation of the law under the claim that there was substitution and lowering of quality.

After some trouble in different parts of the state, the National Confectioners' Association decided that a test case in the courts would give the only satisfactory settlement of the disputed questions. Accordingly the case was brought in the Quarter Sessions Court of Westmorland County, Pennsylvania, before Judge McConnell. The title of the action was "Commonwealth vs. W. S. Kuhns et al., No. 197, August Term, 1916," and the charge, "Violating Pure Food Law." The case was heard on September 7 and 8, 1916, taking up practically two days. The National Confectioners' Association was represented by its counsel, and had present as witnesses leading confectioners of the East, also prominent experts. Many samples of confectionery were presented during the trial.

Judge McConnell decided that the state had not made its case and directed the jury to bring in a verdict of "not guilty." The charge of the court to the jury is given below:

Charge of the Court.

GENTLEMEN OF THE JURY:

There are three counts in this bill of indictment. It is drawn under an Act of Assembly that was approved some years ago. It is largely copied from the United States statute—that is, so far as we are concerned with it—on the same subject.

We, however, have in this state a provision that makes the title to an Act a very important thing that perhaps was not operative in the cases under the United States law. This statute is entitled, "An Act relating to food." That is its most general subject, and whatever does not relate to "food" cannot properly be found in this statute. "Defining food." The Legislature can define its own terms that it makes use of in a statute. "Providing for the protection of the public health and the prevention of fraud and deception by prohibiting the manufacture or sale, the offering for sale, or exposing for sale, or the having in possession with intent to sell, all adulterated, misbranded or deleterious foods." There are two objects aimed at, therefore, in this statute: First, the protection of the health of people; second, the practice of fraud or deception upon the public. These are the two main purposes of this statute, according to the title, and the provisions that we find in the Act must be ancillary to one or other of these two purposes, as we shall endeavor to show later. The balance of the title to this Act is: "prescribing certain duties of the Dairy and Food Commissioner in reference thereto;" that is not so important for present consideration—"and providing penalties for the violation thereof."

There, in brief compass, is expressed the end and object of this statute. The thing at which the mind would halt, if it thinks only of candy as something that tickles the palate, would be whether confectionery of this type is "food"; and the second section of the Act that defines "food" does not say anything on that subject. It does provide that "the term food, as used in this Act, shall include not only every article used for food by man, but also every article used for, or entering into the composition of, or intended for use as an ingredient in the preparation of food for man." But we need not concern ourselves about the question of whether candy—confectionery—is a "food" or not, inas-

much as one of the appellate courts has decided that it is, so that we can put that aside, and go on to the points that were really discussed in your hearing.

This statute in its first section contains a prohibition which is to be enforced by the courts. It is provided "that it shall be unlawful for any person, firm, copartnership, limited partnership, joint stock company or corporate body, by himself, herself, itself, or themselves, or by his, her, its, or their agents, servants, or employees to manufacture, sell, offer for sale, expose for sale, or have in possession with intent to sell, any article of food which is adulterated or misbranded within the meaning of this Act."

There are two prohibited things—the adulteration of food, and the misbranding; the corruption of the food, or the deception of the public by branding a thing as being something which it is not; those are the two things that are prohibited. The title indicates that those are the things that are to be prohibited.

But we have something more that bears on that subject, because the statute itself undertakes to say what is meant by "Adulteration." Section 3 says: "That, for the purposes of this Act, an article of food shall be deemed to be adulterated, first, if any substance has been mixed or packed with it, so as to reduce, or lower, or injuriously affect, its quality, strength, or purity. Second, if any substance has been substituted wholly or in part for the article. Third, if any valuable constituent of the article has been wholly or in part abstracted. Fourth, if it be mixed, colored, or changed in color, coated, polished, powdered, stained, or bleached whereby damage or inferiority is concealed, or so as to deceive or mislead the purchaser, or if, by any means, it is made to appear better or of greater value than it is. Fifth, if it contains any sulphurous acid," and a number of other ingredients, that cut no particular figure in the case that we have to dispose of, because it is not alleged that there is any violation of the fifth paragraph of that third section.

Now, first, "if any substance has been mixed or packed with it so as to reduce, or lower, or injuriously affect its quality, strength or purity." It has been argued that, in so far as the candy that is referred to in the testimony here as having been sold, and kept for sale in violation of this statute is concerned, that these prohibitions of the third section are inapplicable to confectionery; that confectionery is provided for in a part of the statute by itself. We do not feel entirely certain about that, although there can be a plausible argument made upon that matter. But, as we understand it, this statute undertakes to legislate about "food," and in the sense of the legislature this is "food," and, before the special mention of confectionery is reached in this fifth paragraph of the third section, certain injurious substances are mentioned, and we think it would be within the spirit of the law that, if those were shown to be in candy, or in anything else that this statute considers "food," the statute would be violated. When we have confectionery mentioned for the first time, it is mentioned in such a way as to indicate that it was before treated of, along with these other foods, because after mentioning these things that must not be found in food, there is this said: "or if in the case of confectionery." That speaks of it, to my understanding, as being something that was comprehended in what was said before, but some special provision is sought to be made here which immediately follows: "or if, in the case of confectionery, it contains any of the substances mentioned in this paragraph, or any mineral substance, or injurious color or flavor, alcoholic liquor, or any other ingredients not herein mentioned, deleterious to health." Those provisions of the statute make it clear that if any of those ingredients were found in candy, that would be prohibited, and if the statute

was violated, the penalties of the law would fall on the violator. But the special thing is that "if any mineral substances or injurious color, flavor, alcoholic liquor or other ingredients not herein mentioned deleterious to health,"—if those are found in confectionery, in addition to these other things mentioned in the former sections and paragraphs, that special provision is made applicable only to confectionery. Then follows the proviso: "Provided, that this Act shall not be construed to prohibit the use of harmless colors of any kind in confectionery, when used for coloring, and not for any fraudulent purpose." Coloring is, therefore, authorized, at least not prohibited, if it is harmless, and is not fraudulent in its purpose and use. If it covered up something that would conceal a fraud, then the general terms that preceded would be operative, and that would be forbidden; or if it was harmful, it would be prohibited. But harmless coloring of any kind, when used for coloring, and not for any fraudulent purpose, is not prohibited by this statute.

Then the second proviso: "And provided further, That, nothing in this act shall be construed to prohibit the use of common salt, sugar, pure corn syrup, pure glucose, wine vinegar, cider vinegar, malt vinegar, sugar vinegar, glucose vinegar, distilled vinegar, spices or their essential oils, alcohol (except in confectionery), edible oils, edible fats, wood smoke applied directly as generated, or proper refrigeration." Now, that is something that has a general application, except in that paragraph that follows there "except in confectionery." So that we find provisions here that have general application to the general subject commingled with paragraphs that relate solely to confectionery.

Then another proviso is: "And provided further, That, in the manufacture of confectionery, the use of alcohol shall be permitted, as it may be found in customary alcoholic tinctures or extracts used for flavoring purposes only, and as a solvent for *glazes*, and that oil of sweet birch, or methyl-salicylic ester, may be used as a substitute for oil of wintergreen as a flavor": Now there is a clear recognition of the right to use alcohol as a solvent for *glazes* in confectionery. It is not the "glazing" of candy that is prohibited, because this special provision is to the effect, although alcohol as a constituent part of the confectionery is prohibited, yet it is not prohibited in making a solvent for *glazes*. Therefore, *glazes* can be used without violating this statute, and if alcohol is used only for that purpose, it is not prohibited either, as the evidence in this case shows that that is a thing that evaporates, and does not become a constituent part of the confectionery.

Now we extract from this the meaning that there is no attempt at prohibiting the use of *glazes* for confectionery, and that that, in itself, does not constitute a violation of this statute.

Now, then, going back to the third section,—the portion of that section which defines what adulteration shall consist in: "If any substance has been mixed or packed with it so as to reduce or lower or injuriously affect its quality, strength or purity." Those adulterations are adulterations which the statute contemplates would be injurious to the persons that are to be protected by this statute—injurious to the public—and the prohibition is aimed at one or other of those two things, namely, the deception whereby the public may be defrauded, or the injurious effect of it in the use of the article.

Now, so far as the evidence bearing upon that question is concerned, we do not think that there is anything to submit to the jury on the issue that is raised by the testimony in this case. "Mixed with or packed with it": That is something that must go into the quality of the thing that is offered for sale or kept for sale, and injuriously affects its quality, strength or purity. Those three words associated with each other are of such a nature, that they each give color to the other words used. We know a man by the companions he keeps; we know the significance of a word, very often, by the way it is associated with other words, and in keeping in mind the purpose aimed at by the law-makers. Whatever injuriously affects the quality, if that

makes up the confectionery, whatever it gets there by mixture, or by the mode of packing it, if it is injurious, it is clearly prohibited.

Now the word "mixed," as we would understand that word in ordinary use, would mean that there should be a physical mixture, or, it may be a chemical change would take place by the mixing, a changing of its essential nature, and if the mixing in the manufacture so operates, it is a prohibited thing, or if, when it is offered for sale, it has this inherent defect in it, it is a prohibited thing, or if it is packed in such a way that that operates to deteriorate the quality and strength or purity, whether it be confectionery, or anything else, that is prohibited. But the sense in which the witnesses for the Commonwealth have testified with respect to the count in the indictment that is drawn under that first clause is a different sense from the one that we think the act itself imports; and, keeping in mind the act of assembly, we think we have no evidence that would require the submission of the question of fact to the jury on that point.

Then we have the second clause, and the second count in this indictment is drawn under that. That alleges in formal language that there has been adulteration by having shellac substituted in part for the said article of food, contrary to the form of the act of assembly. There is no evidence that there was any substitution of shellac for this confectionery. So that that question has nothing in it that we would be required to submit to the jury.

Then we have another count, the third and last one, drawn under the fourth paragraph. That fourth paragraph is as follows: "If it be mixed, colored or changed in color, coated, polished, powdered, stained, or bleached, whereby damage or inferiority is concealed, or so as to deceive or mislead the purchaser; or if by any means, it is made to appear better or of greater value than it is."

Now there is something that is applicable to the deception that the public is to be protected against by this statute. It is not because it may be colored, or changed in color, or coated, or polished, or powdered, or stained, or bleached—it is not that alone that is prohibited, but it is that thing, done for a particular purpose: "whereby damage or inferiority is concealed." That would be a fraud, and fraud is prohibited by this statute. "Or so as to deceive or mislead the purchaser."

We think there is no doubt that the glazing of confectionery is not forbidden at all; the statute says so. But if it is done for a fraudulent purpose, if it is done so that it operates as a fraud, that would be a prohibited thing. There is not anything here to show that any fraudulent purpose was to be subserved. In fact, we have testimony, when we reach the defendants' side, and that is not answered by the Commonwealth, that this was for the purpose of finishing the confectionery, and preserving it, and protecting it, and that it was a thing that had been in use long before this statute was provided, and that, if this statute had been intended to prohibit such a thing as that it would have more unambiguously expressed such a purpose than it does. And there is no fraudulent purpose shown here in the coloring. And coloring is a thing that if not authorized is plainly not prohibited. And then we have this: "or if by any means it is made to appear better or of greater value than it is." There again we have this rule with respect to associated words and provisions. The one gives color to the other and this is aimed at a form of deception a form of fraud and in order to convict of that there would have to be an exhibition of the fact made in the testimony that it was a deceptive appearance that was the thing done in this particular cause. Some fraudulent thing must be done. We do not have this clause under which the third count is drawn, standing by itself in the statute, disassociated from other forms of fraud, but they are written together, only a smoky line between them, and the fourth paragraph aims at a fraud, or a deception. It is not alleged in the bill of indictment any place that anything that is referred to in the testimony of the Commonwealth is injurious to health, or anything of that sort. We just have these three provi-

sions of the statute. This last one relates to fraud. The first count relates to something that will take away the quality of the article, or the strength of the article, or the purity of the article. We have no testimony that would justify a conviction on that count, because the great weight of this testimony is to the effect that the quality is unaffected and the strength is not taken away, and the purity is not interfered with, but is preserved by the means adopted in this case. And as to the second, we have no evidence on that.

So that, looking at this case in its entirety, we are constrained to say that, if there was a conviction on any of these counts, the Court would not feel that any sentence ought to be pronounced, and we would not feel that we should approve of a verdict of conviction under this indictment,—keeping in mind the express provisions of the statute, and we are also thinking of the fact that the main provisions in this statute that we have here, are the provisions that are contained in the United States law on the same subject, and that confectionery that is glazed, according to the evidence, passes without challenge under that law. This statute is but a copy—here and there are words added, or a clause in one place added—but we do not think that that militates against the substantial significance of the statute as it would be without those words—it does not change the purpose. The purpose of this statute is expressed in its title, and two ends are to be subserved by the administration of this law, namely: that the public is not to be defrauded in anything that is done with respect to food, or with respect to confectionery, which is the article that we have here before us. Second, the public is not to be injured by adulterations of the kind that this statute defines. And to carry out the spirit of the law, under all the evidence that we have before us, there can be no conviction.

American Chemical Society Officers.

The convention in New York of the American Chemical Society, the opening sessions of which were reported in the October issue of this paper, was the biggest and most successful meeting the organization has ever held. During the closing sessions the following official changes were made:

Dr. Charles H. Herty, for the two years last past the president of the society and its present head, was chosen to edit the Journal of Industrial and Engineering Chemistry, to succeed Professor M. C. Whitaker, whose duties at Columbia University make it impossible to continue at the head of the magazine. Prof. Whitaker has made the publication a notably successful enterprise. Dr. Herty will resign his position as head of the Department of Chemistry in the University of North Carolina and remove to New York to take up the editorial work.

Dr. W. A. Noyes, of Urbana, Ill., will continue as editor of the Journal of the American Chemical Society.

E. J. Crane, of Columbus, Ohio, is retained as editor of Chemical Abstracts.

Dr. Charles S. Parsons, of Washington, D. C., was re-elected secretary. He has held the position for ten years.

Dr. Edward G. Love, of New York, was elected treasurer, to succeed Dr. A. B. Halleck, who resigned after twenty-five years' service in the post.

National Safety Congress in Detroit.

Two thousand delegates attended the meeting of the National Safety Congress in Detroit, October 18 and 19. Sectional sessions were held according to the program. In the Health Service section Dr. James K. Burry and Dr. C. W. Hopkins of Chicago, Dr. R. C. Cabot of Boston, and Dr. H. N. Torrey of Detroit were among the speakers. Thursday evening there was a banquet at the Hotel Statler. At a meeting of the executive committee the following officers of the congress were elected:

L. R. Palmer, president; David Van Schaack, first vice-president; W. D. Forster, second vice-president; M. A. Dow, director of exhibits, and third vice-president; W. H. Cameron, general manager and treasurer, and J. J. Lamont, assistant secretary.

COFFEE ROASTERS' NATIONAL CONVENTION.

The tentative program of the National Coffee Roasters' Association convention at Atlantic City on November 14-17 is announced as follows:

Address of welcome, by Hon. Harry Bacharach, mayor of Atlantic City.

Response for N. C. R. A., J. O. Chcek, first vice-president.

Address, "Dollar Exchange," L. J. Burnes, of National City Bank, New York.

Reports of presidents of the various local associations.

Reports of committees.

Address, Dr. Carl L. Alsberg, chief, Bureau of Chemistry, United States Department of Agriculture, Washington, D. C.

Address, "Harmony of Trade Relations," Wm. Bayne, Jr., president New York Coffee Exchange.

Address, Felix Coste, St. Louis, Mo.

Address, "Bankruptcy Law," T. H. Green, Minneapolis, Minn.

Address, "What Do We Know About Coffee?" Floyd W. Robison, vice-president the Detroit Testing Laboratories, Detroit, Mich.

Address, "Our Retail Distributor," Paul M. Haserodt, vice-president the Widlar Company, Cleveland, Ohio.

Address, W. K. Gill, manager coffee department, Stone-Ordean-Wells Company, Duluth, Minn.

Report of special committee on "Retail Grocer's Problem," Frank R. Seelye, chairman, Chicago.

Report of Joint Trade Committee on Pro-Coffee National Advertising Campaign.

Address, C. C. Parlin, the Curtis Publishing Company, Philadelphia, Pa.

Address, "Advertising Coffee Nationally," R. T. Snodgrass, N. W. Ayer & Sons, New York.

Address, "The Increased Cost of Conducting a Wholesale Coffee Roasting Business," Carl W. Brand, the Widlar Company, Cleveland, Ohio.

American Fisheries' Society Meeting.

Fish experts, scientists and conservationists made up the large attendance at the forty-sixth annual meeting of the American Fisheries Society at New Orleans, La., and the sessions held on October 16, 17, 18 and 19 were full of interest. Mayor Behrman welcomed the delegates, and M. L. Alexander, Louisiana Commissioner of Conservation, greeted them in behalf of Governor Pleasant. Prof. J. E. Reighard, president of the society, was in the chair.

Among those who read papers at the meeting or spoke on pertinent topics were John P. Woods of St. Louis, president of the Missouri State Fish Commission; James Nevin, of the State Conservation Commission of Wisconsin; Dr. Geo. W. Field, of Sharon, Mass.; Prof. Henry Baldwin Ward, of the University of Illinois; and Prof. Jacob E. Reighard, of the University of Michigan.

Fish and Game Commissioners in Convention.

The National Association of Fish and Game Commissioners held their convention in New Orleans on October 13 and 14 preceding the annual meeting of the American Fisheries Society.

A resolution requesting the legislatures of states without conservation departments to establish such bodies was adopted.

Another resolution adopted strongly favored national legislation for the protection of live game and the establishment of game reservations, and indorsing the Chamberlain bill.

National Creamery Buttermakers.

The convention of the National Creamery Buttermakers' Association will be held in Minneapolis, Minn., November 14-16. The secretary is Martin H. Meyer, 888 Forty-fourth street, Milwaukee, Wis.

Nut Growers' Annual Convention.

The 1916 convention of the National Nut Growers' Association will be held at Jacksonville, Fla., November 22, 23 and 24.

Government Report on Pack of Canned Foods

Statistics of the Year 1914, as Gathered by the Bureau of Census, showing in Detail the Canning Industry Output

BY AUTHORITY of the Executive Committee of the National Cannery Association, Bulletin No. 37 has been issued, giving the report of the Bureau of Census on the total pack of all commodities, except salmon in Alaska, for the year 1914. This information is collected in compliance with the law, which requires the Bureau of Census to make a detailed report of the total output of all kinds of manufactures. The figures for salmon in Alaska were taken from the report of the Bureau of Fisheries, and the figures on Hawaiian Pineapple were obtained from an authoritative source.

The figures given cover many products on which there have been no statistics collected by the National Cannery Association. This bulletin should be kept for reference, as it furnishes comparative information showing the total output of the canning industry.

FISH AND OYSTERS.

Clams.

48 No. 1 Cans		Massachusetts ...	75,027
Florida	6,197	All other States..	12
Maine	94,813		
Oregon	11,690	Total	5,012,199
Virginia	14,874		
Washington	53,000		
All other States..	4,612		
Total	185,186		

Clam Bouillon.

48 No. 1 Cans			
Florida	30,960		
All other States..	14,254		
Total	45,214		

Clam Chowder.

24 No. 3 Cans			
Florida	11,067		
Maine	86,771		
North Carolina .	5,000		
Total	102,838		

Oysters.

48 No. 1 Cans	Cases		
California	24,870		
Florida	16,172		
Georgia	35,902		
Louisiana	78,516		
Maryland	433,440		
Mississippi	196,047		
North Carolina .	33,795		
South Carolina .	118,416		
Virginia	7,429		
All other States..	52		
Total	944,639		

Salmon.

48 No. 1 Cans	Cases		
California	40,430		
Oregon	376,492		
Washington	1,096,366		
All other States..	12		
Alaska	4,056,653		
Total	5,569,953		

Sardines.

48 No. 1/4 Cans	Cases		
California	302,736		
Maine	4,634,424		

Shrimp.

48 No. 1 Cans			
Georgia	26,014		
Louisiana	162,005		
Mississippi	266,021		
All other States..	5,837		
Total	459,877		

Tuna.

48 No. 1/2 Cans	Cases		
California	437,090		

All Other Canned Fish.

All States	87,761		
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FRUITS.

Apples.

24 No. 3 Cans	Cases		
Arkansas	48,435		
California	110,672		
Colorado	20,093		
Maine	55,924		
Maryland	87,570		
Michigan	140,516		
Missouri	12,971		
Nebraska	3,415		
New York	805,499		
North Carolina .	25,430		
Ohio	614		
Oregon	25,223		
Pennsylvania	92,745		
Virginia	22,656		
Washington	33,745		
All other States .	29,431		
Total	1,514,939		

Apricots.

24 No. 3 Cans			
California	1,005,234		
Utah	46,496		
All other States..	86		
Total	1,051,816		

Blackberries.

24 No. 2 Cans			
Arkansas	6,032		
California	142,138		
Maryland	28,297		

Michigan	9,624	New York	9,072
New Jersey	21,552	North Carolina .	9,070
New York	3,258	Ohio	5,615
North Carolina .	80,343	Tennessee	8,303
Ohio	6,672	Utah	20,955
Tennessee	29,899	Washington	6,294
Texas	6,478	All other States..	32,142
Virginia	10,140		
Washington	93,768	Total	3,407,906
All other States..	13,960		

Blueberries.

24 No. 2 Cans			
Maine	116,001		
Maryland	8,379		
Michigan	6,357		
Vermont	10,486		
Washington	9,907		
All other States .	506		
Total	151,636		

Cherries.

24 No. 2 Cans			
California	131,252		
Colorado	8,835		
Idaho	11,959		
Maryland	31,492		
Michigan	45,699		
New York	214,265		
Ohio	11,801		
Oregon	43,121		
Utah	17,272		
Washington	21,022		
All other States .	6,495		
Total	543,213		

Figs.

24 No. 3 Cans			
Louisiana	4,655		
Mississippi	1,429		
Texas	12,969		
All other States .	1,552		
Total	20,605		

Gooseberries.

24 No. 2 Cans			
Maryland	42,763		
Michigan	28,999		
New York	7,684		
Oregon	3,459		
All other States..	6,688		
Total	89,593		

Grapes.

24 No. 3 Cans			
California	63,697		
All other States .	508		
Total	64,205		

Peaches.

24 No. 3 Cans			
Arkansas	4,903		
California	2,922,637		
Georgia	76,782		
Maryland	201,742		
Michigan	110,391		

Pears.

24 No. 3 Cans			
California	672,782		
Delaware	17,931		
Maryland	156,166		
Michigan	7,345		
New Jersey	57,667		
New York	94,247		
Oregon	20,838		
Utah	4,777		
Washington	25,850		
All other States..	5,159		

Pineapple.

24 No. 3 Cans			
Maryland	68,259		
New York	25,879		
*Hawaii (no. 2 1-2 Cans)	2,262,000		
All other States .	2		
Total	2,356,140		

Plums.

24 No. 2 Cans			
California	150,216		
Michigan	31,126		
New York	72,106		
Oregon	10,699		
Washington	16,834		
All other States..	7,345		
Total	288,326		

Raspberries.

24 No. 2 Cans			
California	3,445		
Illinois	2,574		
Maryland	728		
Michigan	67,142		
New York	199,230		
Ohio	9,453		
Oregon	29,641		
Washington	89,738		
All other States..	3,681		
Total	414,632		

Strawberries.

24 No. 2 Cans			
California	19,615		
Maryland	63,878		
Michigan	23,940		
New Jersey	4,050		
New York	39,490		
Oregon	15,194		
Washington	17,564		
All other States .	2,188		
Total	185,919		

Other Canned Fruits.

24 N. 2 Cans	
California	34,856
Oregon	34,648
Washington	7,773
All other States .	9,573
Total	86,850

MILK AND MEAT.**Meat.**

	Cases
Illinois	4,186,937
Kansas	444,909
Nebraska	48,317
New York	520,444
All other States .	754,900
Total	5,955,516

Sausage.

All States	2,846,322
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Soups.

24 No. 1 Cans	
All States	4,886,098

Milk.

	Cases
Illinois	3,488,023
Indiana	293,910
Iowa	136,969
Kansas	213,182
Maryland	81,270
Michigan	1,594,055
New Jersey	166,266
New York	2,741,138
Ohio	1,052,289
Oregon	482,446
Pennsylvania ...	1,452,269
Utah	369,354
Vermont	351,824
Washington	1,774,316
Wisconsin	3,118,386
All other States .	880,355
Total	18,196,952

VEGETABLES.**Asparagus.**

24 No. 2 Cans	Cases
California	620,859
Illinois	6,300
New York	8,563
All other States .	1,879
Total	637,601

Beans, Baked.

24 No. 2 Cans	
California	29,615
Colorado	12,109
Connecticut	15,050
Illinois	481,088
Indiana	1,396,614
Iowa	49,786
Maine	252,737
Maryland	387,495
Michigan	708,376
New Jersey	1,253,129
New York	35,462
Ohio	450,905
Pennsylvania ...	826,883
Utah	18,949
Vermont	32,665
Wisconsin	32,052
All other States .	3,468
Total	5,977,383

Beans, String.

24 No. 2 Cans	
California	78,233
Colorado	134,997
Indiana	13,305
Kentucky	12,619
Maine	37,207
Maryland	277,959
Michigan	95,381
Minnesota	3,974
New York	705,220
North Carolina .	6,559
Ohio	27,083
Oregon	9,292
Pennsylvania ...	96,292
Tennessee	42,216
Utah	48,835
Vermont	16,494
Virginia	14,774
Washington	10,643
Wisconsin	139,014
All other States .	19,927
Total	1,790,024

Beans, Lima.

24 No. 2 Cans	
California	31,735
Illinois	15,797
Indiana	100
Maine	9,037
Maryland	22,922
Michigan	68,710
New Jersey	220,442
New York	23,096
Ohio	29,340
Virginia	12,669
All other States .	9,645
Total	443,484

Beans, All Other.

24 No. 2 Cans	
California	15,299
Illinois	248,552
Indiana	181,972
Iowa	20,057
Maine	26,639
Maryland	23,649
Michigan	50,201
New York	151,664
Ohio	41,822
Wisconsin	22,250
All other States .	7,297
Total	783,411

Beets.

24 No. 3 Cans	
Maryland	15,333
New Jersey	15,068
New York	93,517
Ohio	31,402
Pennsylvania ...	20,107
Wisconsin	58,086
All other States .	18,119
Total	251,632

Corn.

24 No. 2 Cans	
Delaware	215,280
Illinois	1,535,215
Indiana	668,443
Iowa	1,530,154
Maine	1,101,333
Maryland	1,482,093
Michigan	138,185

Minnesota	274,193
Missouri	3,021
Nebraska	225,801
New Hampshire .	31,961
New York	769,562
Ohio	1,167,063
Pennsylvania ...	207,152
Tennessee	36,964
Vermont	157,111
Virginia	1,584
Wisconsin	349,542
All other States .	25,293
Total	9,919,950

Hominy.

24 No. 3 Cans	Cases
Colorado	25,868
Illinois	120,474
Indiana	456,591
Iowa	20,595
Maryland	8,632
Ohio	13,185
Tennessee	38,167
Utah	1,988
All other States .	600
Total	686,100

Kraut.

24 No. 3 Cans	
California	4,032
Colorado	84,372
Illinois	86,280
Indiana	359,619
Iowa	17,006
Maryland	39,628
Michigan	54,307
Minnesota	8,440
New York	195,069
Ohio	161,502
Tennessee	11,902
Wisconsin	145,401
All other States .	22,061
Total	1,184,219

Peas.

24 No. 2 Cans	
California	165,540
Colorado	278,990
Delaware	178,810
Illinois	434,615
Indiana	434,411
Maryland	564,442
Michigan	490,131
Minnesota	83,355
New Jersey	85,512
New York	1,957,737
Ohio	259,837
Pennsylvania ...	63,587
Utah	334,144
Virginia	17,549
Wisconsin	3,421,125
All other States .	56,598
Total	8,826,284

Pumpkin.

24 No. 3 Cans	
California	7,944
Colorado	32,412
Delaware	6,679
Illinois	50,016
Indiana	304,150
Iowa	34,963
Kentucky	7,729
Michigan	14,209
Minnesota	5,662

Missouri	1,004
New Jersey	69,167
New York	84,292
Ohio	102,279
Pennsylvania ...	10,214
All other States .	47,657
Total	789,363

Sweet Potatoes.

24 No. 3 Cans	
Alabama	1,794
Delaware	39,693
Georgia	1,466
Louisiana	18,008
Maryland	131,451
Mississippi	65,872
New Jersey	24,936
Tennessee	9,943
Virginia	133,463
All other States .	28,389
Total	454,415

Spinach.

24 No. 3 Cans	
California	23,755
Maryland	282,795
New York	52,596
Ohio	15,450
All other States .	17,194
Total	391,790

Squash.

24 No. 3 Cans	
California	21,163
Maine	25,172
Maryland	7,317
Michigan	24,778
New Jersey	45,624
New York	19,819
All other States .	21,869
Total	165,682

Succotash.

24 No. 2 Cans	
Maine	33,547
Maryland	24,585
Michigan	55,268
New York	115,427
Ohio	19,249
All other States .	22,061
Total	270,977

Tomatoes.

24 No. 3 Cans	
Arkansas	152,536
California	1,730,487
Colorado	149,363
Connecticut	46,515
Delaware	1,326,275
Illinois	74,850
Indiana	1,172,670
Iowa	165,338
Kentucky	111,789
Maryland	6,656,810
Michigan	141,449
Missouri	366,331
New Jersey	695,218
New York	563,400
North Carolina .	11,444
Ohio	508,829
Pennsylvania ...	218,105
Tennessee	165,524
Texas	518
Utah	696,257

Virginia	1,025,477	Maryland	9,001
West Virginia ..	115,720	South Carolina .	1,741
Wisconsin	14,945	Virginia	434
All other States.	90,452	All other States.	4,971
Total	16,200,302	Total	34,042

Tomato Pulp.

12 No. 10 Cans	
California	15,205
Colorado	8,972
Delaware	66,361
Indiana	325,398
Maryland	72,841
Michigan	38,358
New Jersey	105,001
New York	21,178
Ohio	60,777
Pennsylvania ...	8,167
Utah	11,128
All other States.	18,765
Total	752,151

Okra and Tomatoes.

24 No. 3 Cans	
Louisiana	17,895

All Other Vegetables.

24 No. 3 Cans	
California	44,314
Illinois	67,545
Indiana	119,375
Louisiana	29,030
Maine	8,911
Maryland	57,887
Michigan	360
New Jersey	19,873
New York	62,032
Ohio	7,026
Pennsylvania ...	208,272
Tennessee	147
Texas	57,669
Wisconsin	5,054
All other States.	13,264
Total	700,759

*The Census Bureau Report does not include the pack of pineapple in Hawaii, the pack of which in 1914 was 2,262,000 cases, valued at \$5,278,000.

†The Census Bureau Report does not include the pack of salmon in Alaska, and the figures used have been taken from the report of the Bureau of Fisheries.

°The report of the Census Bureau on condensed milk was expressed in pounds. In the above figures, 48 pounds represents one case.

‡The report of the Census Bureau on meat was expressed in pounds. In the above figures 27 pounds represents one case.

§The report of the Census Bureau on sausage was expressed in pounds. In the above figures 26 pounds represents one case.

Statement of Investment in the Salmon-Canning Industry in Alaska in 1914.

(Taken from the report of the Bureau of Fisheries)

	No.	Value.
Canneries	81	\$ 8,227,861.00
Working capital		\$11,994,227.00
Wages paid		\$ 5,364,298.00

RECAPITULATION.

Fish and Oysters.	Total Number Cases	Census Bureau Valuation
Clams	185,186	\$670,363
Clam Bouillon	45,214	80,867
Clam Chowder	102,838	386,998
Oysters	944,639	2,676,951
† Salmon	5,569,953	27,633,284
Sardines	5,012,199	6,238,933
Shrimp	459,877	1,725,621
Tuna	437,090	1,638,675
All other canned fish	87,761	269,901
Fruits.		
Apples	1,514,939	\$2,392,289
Apricots	1,051,816	3,060,626
Blackberries	452,161	788,614
Blueberries	151,636	320,508
Cherries	543,213	1,628,975
Figs	20,605	159,522
Gooseberries	89,593	142,876
Grapes	64,205	110,995
Peaches	3,407,906	9,585,773
Pears	1,062,762	3,853,700
*Pineapple	2,356,140	4,642,250
Plums	288,326	438,238
Raspberries	414,632	1,137,207
Strawberries	185,919	557,519
Other canned fruits	86,850	356,082
°Milk.	18,196,052	58,747,252
‡Meat.	5,955,516	26,417,624
§Sausage.	2,846,322	9,845,669
Soups.	4,886,098	7,877,057
Vegetables.		
Asparagus	637,601	2,790,817
Beans, Baked	5,977,383	11,535,047
Beans, String	1,790,024	3,060,330
Beans, Lima	443,484	904,050
Beans, all other	783,411	1,065,594
Beets	251,632	511,900
Corn	9,919,950	13,923,057
Hominy	686,100	712,991
Kraut	1,184,219	1,567,717
Peas	8,826,284	15,089,047
Pumpkin	789,368	1,023,008
Sweet Potatoes	454,415	736,759
Spinach	391,790	736,686
Squash	165,682	294,409
Succotash	270,077	455,956
Tomatoes	16,200,302	25,532,217
Tomato Pulp	752,151	1,451,051
Okra and Tomatoes	34,042	75,946
All other Vegetables	700,759	2,944,085
Total	106,678,122	\$258,798,036

STATEMENT ON CANNING AND PRESERVING FRUITS AND VEGETABLES, FISH AND OYSTERS, FOR 1914.

FURNISHED BY BUREAU OF CENSUS

	Fruits and Vegetables	Fish	Oysters	Total
Number of establishments	3,153	330	65	3,548
Persons engaged in manufacture	58,329	10,306	2,296	70,931
Proprietors and firm members	3,520	263	60	3,843
Salaried employes	4,484	974	149	5,607
Wage earners (average number)	50,325	9,069	2,087	61,481
Primary horsepower	88,303	10,966	1,895	101,164
Capital	\$98,738,000	\$28,464,000	\$2,077,000	\$129,279,000
Services	22,412,000	4,949,000	552,000	27,913,000
Salaries	5,107,000	1,270,000	128,000	6,505,000
Wages	17,305,000	3,679,000	424,000	21,408,000
Materials	103,293,000	19,467,000	1,225,000	123,985,000
Value of products	149,176,000	31,111,000	2,238,000	182,525,000
Value added by manufacture (value of products less cost of materials)	45,883,000	11,644,000	1,013,000	58,540,000

The above statement does not include Milk or Meats, Pineapple in Hawaii, or Salmon in Alaska.

A New Method of Manufacturing Pure Lard

W. B. Albright's Process Described at Packers' Convention
and Animal Flour Shown as an Original Food Product

SOME years ago I had the honor to address the American Meat Packers' Association at a convention held in Chicago, my subject at that time being "Practical Considerations in Lard Manufacture."

It is not my purpose to review so fully as I did at that time the successive steps in the detailed manufacture of lard, but I will content myself with briefly alluding to my former address.

Suffice it to say that the manufacture of lard has remained practically the same for a great many years, and the methods in vogue today are very closely along the lines of what I described to the members of this association some seven years ago.

At the present time I want to call your attention to a few facts that I have recently been able to work out in a practical manner, pertaining particularly to the manufacture of kettle-rendered lard.

For a great many years past I have encouraged every one to develop as much as possible the manufacture of kettle-rendered lard. It has been my dream for a great many years that eventually the entire pure lard of the country should carry a kettle-rendered flavor. To the housewife and cook the flavor of kettle-rendered lard is about the only flavor that they really appreciate. They know this flavor and expect it to some extent.

It has always seemed very desirable to me that a condition be brought about in the manufacture of pure lard wherein the public can be given what would appeal to them as being the best.

The members of this association should not overlook the fact that for almost thirty years there has hardly been an improvement in the lard furnished their customers which could be called a distinct improvement. The methods of manufacture in vogue today are practically the same as they were thirty years ago.

In the meantime there have come forward several substitutes for lard, the most notable of all these substitutes being cottonseed oil. Thirty-five years ago cottonseed oil was not considered fit for edible purposes, and was sold entirely for use in the manufacture of soaps.

You are all familiar, however, with the rapid strides that have been made in improving the quality of cottonseed oil for edible use. As a result of these improvements there are large manufacturers of cotton oil products pressing their goods for sale, and liberally advertising the same as being better than hog lard.

In addition to cottonseed oil there is another fat which is being pressed forward to take the place of lard. I refer to coconut oil. This also is becoming quite a serious factor as a competitor of hog lard. So that aside from other reasons, it will be well for manufacturers of pure lard to seriously consider any method which is suggested that would result in a material improvement in their pure lard.

Owing to the great scarcity of all kinds of fats at the present time, you may not feel the necessity of safeguarding the volume of your pure lard sales. But we must remember that present conditions are likely to continue but for a short period, and sooner or later some efforts will have to be undertaken to convince the housewives all over this country that pure lard is superior to all other cooking fats.

At the same time, I believe it is well to take these matters in hand at a very early date, and therefore I hope that you will welcome the suggestions that I have to make.

At the present time there are too many grades of lard offered to the public. We have three distinct grades: pure leaf lard, kettle-rendered lard, and pure lard. It seems reasonable to believe that we could get along better with two grades, these grades being leaf lard and pure lard.

I will not attempt to discuss the question of leaf lard at

all. This fortunately, is such an excellent product that it needs no further consideration or attention than that already given to it.

I suggest that you do entirely away with the brand of lard known as "kettle-rendered lard." The volume of the sales of this grade of lard is, relatively speaking, very small, and the requirements of the manufacturers to maintain this grade of lard are expensive and useless, necessitating a high price in its sale, and the carrying of an extra quantity of lithographed pails, labels, boxes, etc.

Kettle-rendered lard has always been sold at a very considerable advance in price over pure lard, and this advanced price has been the biggest cause of the sales being small in volume. The reason for this is that it actually costs the manufacturer more money to make it. This extra cost is almost entirely due to the amount of lard left in the cracklings.

How to Make Kettle-Rendered Lard at a Profit.

No progress along the lines of my suggestion will be practical, unless the percentage of the lard left in the cracklings can be reduced to a very much smaller amount than is customary. Fortunately, I have found a way of handling the cracklings so that a very small amount of lard is left in them.

The economies in this respect that I have brought about make it possible for me to state that kettle-rendered lard can now be made fully as cheaply as the lard that is cooked under steam pressure in rendering tanks.

The suggestion that I have to offer consists of developing to the fullest extent the kettle-rendering of all the fats possible, and mixing with the same the necessary amount of lard that must be steam-rendered in the rendering tanks; marketing one product consisting of steam-rendered and kettle-rendered lard, mixed under one brand to be known as "pure lard."

I believe that all manufacturers can afford to forego the luxury of the brand of kettle-rendered lard.

We will now discuss in more detail just how to manufacture this new grade of pure lard. Admitting that it is still necessary to steam-render a certain percentage of hog fats, this percentage amounts to only 35 per cent of the total. It is possible to take the remaining 65 per cent and kettle-render them.

I will not take up your time to describe in detail the method of kettle-rendering lard, as my paper on that article, read at your convention in Chicago in October, 1909, is generally speaking, well known to all of you, and I believe that system is very closely followed today.

However, as already stated, the great thing needed in the manufacture of kettle-rendered lard has been the recovery of the lard from the cracklings. The general method of pressing the lard from the cracklings is still in vogue everywhere, but I am sorry to say that the amount of lard left in the cracklings by the best presses that I know of amounts to, roughly speaking, 10 to 14 per cent, and from 15 to 30 per cent as a rule, where pressing is not so thoroughly done and the most powerful presses used.

This large percentage of lard left in the cracklings has been for years the great drawback. It is possible, however, today, to press lard cracklings so that they will not contain more than 5 per cent lard. When this is done we have the lard crackling in an edible condition with such a small percentage of lard in it that it can be further manipulated and made into a very highly edible product.

When lard cracklings do not contain more than 5 per cent of lard they are easily reduced by grinding to a condition of flour, and in this flour condition lard cracklings may well be called "animal flour."

I would like to present to you the result of several tests showing the small amount of cracklings that come from different fats when kettle-rendered. The following are actual tests obtained from rendering five thousand pounds at one rendering:

Fats Taken	Yield of Cracklings
1. 55 per cent skinned back fat, 45 per cent cutting floor trimmings	2.95 per cent
2. 61 per cent skinned back fat, 39 per cent plates	3.15 per cent
3. 100 per cent clear plates.....	4 per cent
4. 100 per cent skinned back fat.....	2.4 per cent
5. 35 per cent skinned back fat, 65 per cent cutting floor trimmings	3½ per cent

The amount of lard left in the above cracklings will average close to 5 per cent. This is based upon numerous tests made from time to time.

The fats giving lowest percentage of 4.2 per cent were those containing considerable cutting floor-trimmings. The highest percentage, 6.7 per cent, occurred in the test which had 61 per cent of skinned back fat.

Animal Flour.

I produced my first animal flour from lard cracklings in February of this year, and I have a sample here which I will be glad to have any member examine. This particular sample shows a fat content of 6 per cent and a protein content of 87.2 per cent. In this condition you can readily see that it should become a very valuable food product.

It has not been possible for me to develop the use of this flour to any extent, but I have used it in my home, in bread for the table, and I have brought with me also for your examination some of this bread.

These loaves of bread which you see here were made with one pound of this identical animal flour which is here upon the table, mixed with five pounds of Pillsbury's Best flour. The mixture I made by weight, so as to see that the proportions were accurate, and then had the loaves baked at home in the regular way in which all of our bread is baked. The bread is very palatable. In one of these loaves there is more than double the nutriment that there is in a loaf of bread made with Pillsbury's Best flour alone.

Another use for the flour that I can recommend is in pure pork sausage. A very small percentage added to pure pork sausage makes the most delightful texture, and the sausage when cooked and placed on the table is certainly very delicious and much more toothsome with the flour added than without.

When the proper use for this crackling flour or animal flour is developed, it will command a price that will make its production very desirable.

It is commonly understood that you cannot obtain the same yield from kettle-rendered lard that you can obtain from the steam tank, but when cracklings are properly pressed the yield of lard is fully as great in the kettle-rendering process as it is in the steam-rendering process. So there is nothing to be considered except the increased value of the animal flour as compared with the value of the same materials in tank water and fertilizer.

You have already absorbed my suggestion, I think fully, but concisely stated, it is simply this:

Render 65 per cent of fats in the kettle-rendering system. Render the remaining 35 per cent of fats in the steam tank system. Then bring these two grades together, and make one product.

To do this I recommend that the steam-rendered lard be brought to the kettle-rendering kettle, and cooked with the fats to be kettle-rendered. This lard then will be drawn off as one grade of lard, and sold under the brand of "pure lard."

The advantages gained by establishing a grade of pure lard along the lines of my suggestions would be:

1. A pure lard of superior quality and flavor; something that can be advertised as the best cooking fat in the world.

2. Economies in manufacturing costs.

3. A reduction of supplies carried in stock, arising from reducing two brands of lard into one.

4. Making pressed cracklings available as an edible product.

I cannot close without again calling your attention to this flour made from lard cracklings. This flour can be easily produced with an average content of 87 per cent protein. A pound of lard cracklings in this form therefore would be practically the richest edible food product in your entire line of manufacture.

Do you realize, gentlemen, that in this flour before you there is represented in one pound by weight more nutriment than there is in any four pounds of beefsteak that you can cut from your best beeves?

I am aware that I am making a suggestion to a class of manufacturers who have never been called dreamers. The public estimate of meat packers is that they are hard-headed, commonsense business managers. The opinion is popular that nothing escapes you except the squeal of the hog, but in these lard cracklings there is a profit escaping you which if you do not look out will destroy your public reputation.

Animal flour made from lard cracklings could be readily used to increase the nutriment value of many varieties of foods. It would be easily absorbed in soups or in bread, and if this flour were available today you would have no trouble in disposing of it to many localities in Europe, where anything with such a high food value as this flour would be of absorbing interest at the present time.

American Association of Refrigeration.

The American Association of Refrigeration held its sixth annual convention at the Congress Hotel, Chicago, October, 11, 12 and 13. The attendance was largely in excess of any previous meeting and many special features made the gathering a successful one in every way. The program was especially representative of the industry as a whole, supplemented by an exhibition of apparatus, supplies, etc., used in refrigeration. President Frank A. Horne, of New York, was in the chair.

The following officers were elected for the coming year: President, Frank A. Horne, president Merchants' Refrigerating Co., New York, N. Y. Vice presidents: James G. Black, secretary and manager, Des Moines Ice & Cold Storage Co., Des Moines; Thomas Shipley, vice president and general manager, York Mfg. Co., York, Pa.; Louis Block, 45 East 42d street, New York, N. Y.; H. L. Park, vice president, Illinois Central Railroad, Chicago, Ill.; R. H. Switzer, general manager St. Louis Refrigerating & Cold Storage Co., St. Louis, Mo.; Fred Krey, president American Meat Packers' Association, St. Louis, Mo.; Col. Jacob Ruppert, Jr., past president United States Brewers' Association, New York, N. Y. Secretary, J. F. Nickerson, editor "Ice and Refrigeration," 431 S. Dearborn street, Chicago, Ill. Treasurer, John S. Field, chairman board of directors, Consumers Co., Chicago, Ill.

Hotel Men to Meet in New York.

The National Hotel Men's Exposition will open at the Grand Central Palace in New York City on Tuesday, November 21, and continue four days. At least 6,000 hotel men from all parts of the country will attend.

Many unique features are planned in connection with the exposition. One of the most original and interesting will be a competitive contest in the culinary and food preparative art. This will include every known art in the field of culinary endeavor. All entries must be original and any attempt to copy will be visited with severe penalties. Many new and palatable dishes will thus be made public by the famous hotel chefs throughout the country, as the recipe for the dish must accompany the entry.

Full information concerning the exposition can be obtained by addressing Mark A. Cadwell, secretary, New York State Hotel Association, Thirty-third street and Fifth avenue, New York City.



Notes from Field of Food Control



Food Package Markings Required by Law.

Under date of September 28, 1916, the U. S. Department of Agriculture has sent out the following notice:

Food Inspection Decision 168.—Amending Paragraph (c) of Regulation 29, which relates to marking the quantity of food in package form.

Paragraph (c) of regulation 29 of the Rules and Regulations for the Enforcement of the Food and Drugs Act, as amended in Food Inspection Decision 163, issued January 17, 1916, is hereby further amended by striking out the entire paragraph and substituting therefor the following:

(c) Statements of weight shall be in terms of avoirdupois pounds and ounces; statements of liquid measure shall be in terms of the United States gallon of 231 cubic inches and its customary subdivisions, i. e., in gallons, quarts, pints or fluid ounces, and shall express the volume of the liquid at 68° F. (20° C.); and statements of dry measure shall be in terms of the United States standard bushel of 2,150.42 cubic inches and its customary subdivisions, i. e., in bushels, pecks, quarts, or pints, or, in the case of articles in barrels, in terms of the United States standard barrel and its lawful subdivisions, i. e., third, half, or three-quarters barrel, as fixed by the act of March 4, 1915 (38 Stat., 1186); *Provided*, That statements of quantity may be in terms of metric weight or measure. Statements of metric weight should be in terms of kilogrammes or grams. Statements of metric measure should be in terms of liters or centiliters. Other terms of metric weight or measure may be used if it appears that a definite trade custom exists for marking articles with such other terms and the articles are marked in accordance with the custom.

California's New Milk Law in Effect.

The law enacted at the latest session of the California legislature, regulating the testing, pasteurization, and labeling of all milk and butter prepared for public sale, went into effect October 1. "We predict," says the State Board of Health, in its monthly bulletin, "that the statistics for the first year after the new law goes into effect will show a distinct reduction in the number of deaths of children, and complete absence of large milk-borne typhoid epidemics, like the one just ended in the west side oil fields of Kern County, and the less serious recent outbreaks in Richmond and Colusa."

Minnesota Food Products Report.

Sixteen years' fight by the Minnesota Dairy and Food Commission against the use of injurious preservatives and other adulteratives has effected a marked improvement in the wholesomeness of food products sold in Minnesota, according to Julius Hortvet, state chemist.

Only one out of 30 samples of tomato catsup, for example, he said, was found illegal, while more than 50 per cent of the samples were "outside the law" in other years.

"Of 3,475 samples of food products taken by state food inspectors on suspicion that they failed to comply with regulations, only 1,798, or about half the total, were found illegal," said Mr. Hortvet. "Thousands of other brands of known honesty were passed by the inspectors, so the improvement can be imagined."

Sweating Fruit May Violate Law.

Growers and shippers of oranges and grapefruit are making many inquiries of the United States Department of Agriculture in reference to what action will be taken by the Department during the coming season toward preventing the shipment into interstate commerce of immature citrus fruits which have been artificially colored by sweating. The officials in charge of the enforcement of the Food and Drugs Act state they will be guided in their action by the position of

the Department previously announced, to the effect that the shipment in interstate commerce of immature oranges and grapefruit, which are sweated either before shipment or en route is a violation of the Food and Drugs Act when the sweating conceals inferiority by making unripe fruit appear to be ripe. The sweating process turns the green color of the unripe fruit to yellow, and fruit so treated has the appearance of being ripe. However, extensive investigations by the Department have shown that the sweating process does not ripen the immature fruit.

One of the tests to determine whether or not an orange is mature is the so-called "eight-to-one test." The test is based on the ratio of the soluble solids to the acid contained in the juice of the orange. The soluble solids increase as the oranges ripen, while the acid decreases. The oranges are considered immature until the juice contains soluble solids equal to, or in excess of, eight parts to each part of acid contained in the juice. The amount of soluble solids in orange juice is about equivalent to the amount of sugar it contains. The ratio of the sugar to the acid in the juice determines the sweetness of the orange. In the case of grapefruit, maturity is indicated by a ratio of seven parts of soluble solids in the juice to one part of acid. The United States Department of Agriculture will send to any grower or shipper, upon request, specific directions for making the eight-to-one test.

If oranges do not meet this test they are considered immature, and if colored by sweating, then it is considered that inferiority is concealed.

The position of the United States Department of Agriculture in reference to the sweating of immature citrus fruit is stated in Food Inspection Decision 133, and in Service and Regulatory Announcements of the Bureau of Chemistry numbered 11 and 15, which will be furnished upon application to the Department.

Butter Emulsions and Short-Weight Potatoes.

State Dairy and Food Commissioner James W. Helme, of Michigan, sends out the following circular, embodying timely hints anent the high cost of living:

With the prevailing high prices of all food products, consumers are warned to watch very carefully in their purchases for adulterations and short weights. Recent instances which have come to the attention of this department are as follows:

We have discovered that cold storage butter is being shipped into Michigan from Chicago to several large creameries. These creameries freshen the butter by manipulation and are able to incorporate a certain amount of extra water thereby increasing the weight of the butter. Normal butter should not contain to exceed 15 per cent or 16 per cent moisture. By this manipulation process we have taken samples of butter that show 25 per cent moisture. Forty cents a pound is too much to pay for water and a final warning is given all creameries that this practice must cease or prosecutions will follow. We also find that large numbers of oleo and butter prints are an ounce shy on the pound which is a practice which must be stopped.

The high price of potatoes has brought out numerous violations of the Short Weight Law. The law requires sixty pounds as the weight of a legal bushel of potatoes. A peck should weigh 15 lbs. We have taken up samples that show only twelve to thirteen pounds to the peck. Consumers are asked to insist upon having full weight when buying potatoes.

In southern Michigan potatoes are being shipped in from the States of Maine and New York and being sold at the car door for \$1.50 per bushel. In parts of northern Michigan, potatoes are selling for less than \$1 per bushel. There is no reason why Michigan potatoes should not be used in Michigan.

We would ask all co-operative potato growers' and sellers' associations to send to this Department their name and ad-

dress. We would also like to receive the names of all dealers and other buyers who desire to buy potatoes in car-load lots in northern Michigan. In this way we can put producers and consumers in touch with each other, and thus furnish a market for Michigan potatoes in Michigan.

Tentative Draft of Grain Standards Regulations Published.

A tentative draft of the rules and regulations for the enforcement of the U. S. Grain Standards Act has been issued by the Office of Markets and Rural Organizations of the U. S. Department of Agriculture, in Service and Regulatory Announcements No. 12.

These tentative rules and regulations provide (1) for the methods of obtaining licenses by persons desiring to inspect and grade grain for shipment in interstate or foreign commerce, including both state inspectors and other persons; (2) the duties of such inspectors when licensed; (3) the manner in which interested parties can appeal to the Secretary of Agriculture from the decision of any licensed inspector regarding the grade of any lot of grain; (4) the manner in which interested parties can request the Secretary of Agriculture to determine the grade of any lot of grain which has been shipped by grade in interstate or foreign commerce from a place in which there is no inspector to another place without an inspector; (5) the manner of determining and assessing the fees for referring an appeal or dispute to the Secretary; (6) requirements with which shippers must comply who desire to ship grain by grade in interstate and foreign commerce from a point at which there is no inspector to another point without an inspector; (7) steps which will be taken when grain is found to have been misgraded or misrepresented; and (8) the manner in which information relative to the enforcement of the act will be published from time to time.

A large number of copies of these tentative rules and regulations have been mailed to members of the grain trade and can be obtained by others interested upon application to the Office of Markets and Rural Organization, U. S. Department of Agriculture, Washington, D. C.

After those interested have had an opportunity to familiarize themselves with the tentative rules and regulations, hearings will be held in the field and in Washington, at which modifications may be suggested. Suggestions by mail also will be considered by the Department.

Must Mark Eggs In Canada.

The government of British Columbia, Canada, has recently put in force an "Egg Marks Act." It requires that any and all eggs which have been preserved in water glass, lime water, salt, bran, or anything except cold storage, must be stamped plainly with the word "preserved" in gothic lettering, when placed on sale. When they are provincial fresh eggs the receptacle must bear a card with the words "B. C. Fresh" in letters four inches high. Cold storage eggs must likewise be labelled "B. C. Cold Storage," or "Alberta Cold Storage" or "U. S. Cold Storage," according to the source of origin. All stores or shops selling Chinese eggs must display a sign to that effect and all the eggs must be labelled "Chinese Eggs."

Wholesale dealers, and producers selling at wholesale, are also required to mark on outside of each package the terms "fresh," or "preserved" or "cold storage," as the case may be, together with the initials indicating the province or country of origin, but this marking need not be in letters four inches high, as the retailer is required to use. Eggs not fresh enough for serving as boiled eggs must be marked "cooking eggs."

The officials charged with enforcing this act are empowered to enter any premises within the province, at any time, where eggs are sold or offered for sale, to inspect all eggs on hand and determine the correctness of the markings. Severe penalties are provided for non-compliance with the provisions of the act.

The Danish government has prohibited the exportation of fresh, dried and preserved fruit.

SPICE HEARING CONSIDERS STANDARDS.

Representing the United States Department of Agriculture, the Association of Official Agricultural Chemists and the Association of American Dairy, Food and Drug Officials, the joint committee on definitions and standards held a public hearing in the library of the Appraiser's Stores, New York City, October 16. Dr. C. L. Alsberg, chief of the Bureau of Chemistry, who succeeded Dr. Wiley, presided. Present at the session were men from several parts of the country who gave their views on the topics discussed, as reported by the *New York Journal of Commerce*. Isaac King Phelps, of the Bureau of Chemistry, and John Phillips Street, of the Government's Experimental Station at New Haven, Conn., were among those seated with Dr. Alsberg.

Suggested standards for cayenne and red pepper caused considerable discussion. The definition of each also was dwelt on at length. E. W. Durkee said that most people who sent in orders for red pepper called for cayenne in their communication. John Clarke, of John Clarke & Co., and William D. Weikel, of Weikel & Smith Spice Co., intimated there would be a shortage of some spices if the Government officials made their regulations too strict.

Chairman Alsberg held that Hungarian pepper could be called paprika, while that from Spain should be labeled as such. He pointed out that the Department of Agriculture was trying to produce a product in South Carolina that would be as mild as Hungarian pepper. The red pepper question now is a serious one to the trade. It is scarce and the Allies are said to be purchasing it in large quantities.

Mr. Clarke stated there were thirty varieties of red peppers and that the Government should not limit its activities to two grades. He said there should be a standard for the grades from elsewhere than Africa and Japan. Mr. Clarke declared the trade thought the standard set by the Government too hard with which to comply.

It is proposed to change the standard of ginger to read: "Ginger is the washed and dried or decorticated and dried rhizome of Zanzibar zingiber (L) Krast., and contains not less than 42 per cent of starch; not more than 8 per cent of crude fibre, not more than 7 per cent of total ash, not more than 1 per cent of lime, and not more than 2 per cent of ash insoluble in hydrochloric acid." Mr. Durkee called the present standard ridiculous.

According to present plans, the standard for ground mustard is to be changed so as to read: "Ground mustard is a powder made from mustard seed, with or without the removal of the hulls and a portion of the fixed oil, and contains not more than 15-10 per cent of starch and not more than 6 per cent of total ash." There is a difference of opinion among the trade regarding this standard.

Mr. Clarke, who is secretary of the American Spice Trade Association, will receive copies of the recommendations that are made by the committee. These documents will be sent to the members of the association by Secretary Clarke as soon as they reach him.

Others who attended the hearing were R. E. Doolittle, of the Bureau of Chemistry; Harry E. Sundall, of Neickel & Smith, Philadelphia; R. A. McCormick, of the McCormick Co., Baltimore; H. P. Herrfeldt, of H. P. Herrfeldt & Co.; N. L. Schmid, the Woolson Spice Co., Toledo; Arns Vichaeiver, the Pompeian Co., and A. Hugh Bryan, of Arbuckle Brothers.

American Specialty Manufacturers.

The annual convention of the American Specialty Manufacturers' Association will be held at Pittsburgh from November 15 to 17, inclusive. Thirty-five companies are included in the association. Carl A. Lautz, of Lautz Brothers & Co., Buffalo, is president.

Disagreeable foreign flavors in foodstuffs may be legitimately classed as adulteration.

Correct scales, weights and measures are essential for the economical distribution of food.

U. S. Department of Agriculture

BUREAU OF CHEMISTRY

C. L. Alsberg, Chief of Bureau

SERVICE AND REGULATORY ANNOUNCEMENTS.

No. 18, Issued October 11, 1916.

177. Ergot in Caraway Seed.

An examination of a recent importation of caraway seed showed a considerable number of more or less ergotized fruits. Caraway seed containing ergot is considered to be adulterated under the Food and Drugs Act.

178. Adulterated Marjoram Refused Entry.

An examination of a recent importation of marjoram leaves showed the presence of finely cut leaves of *Coriaria myrtifolia*. This adulterant contains a poisonous principle which may render the article injurious to health. Therefore, it will be recommended that importations of marjoram leaves containing it be excluded.

179. Poppy Seed Containing Henbane Seed.

The attention of the bureau has been called to the fact that commercial poppy seed (*Papaver somniferum* L.) sometimes contains toxic henbane seed (*Hyoscyamus niger* L.). It will be recommended that shipments of poppy seed be refused admission if they contain more than 0.05 per cent of henbane seed.

180. Labeling of U. S. P. or N. F. Articles Not Conforming to Standard. (Supplementing Item 161 in S. R. A. Chem. 16.)

With reference to the labeling of drugs recognized in the United States Pharmacopœia or National Formulary, but which do not conform to the standard of strength, quality, or purity, as determined by the tests laid down therein, in the opinion of the bureau, the label should bear either a statement to the effect that the drug is not a United States Pharmacopœia or National Formulary article, together with a statement showing its own actual strength, quality, or purity, or a clear and exact statement of the nature and extent of the deviation from the standard of strength, quality, or purity set out for the article in the United States Pharmacopœia or National Formulary. Item 161, Service and Regulatory Announcements, Chemistry 16, is modified accordingly.

181. Mixtures of Coffee Chaff and Coffee Screenings With Coffee.

Coffee is the seed of *Coffea arabica* or *Coffea liberica*, freed from all but a small portion of the spermoderm. Coffee chaff and coffee screenings are not coffee, and mixtures of these with coffee are adulterated and misbranded under the provisions of the Food and Drugs Act, if labeled, sold, or offered for sale as coffee.

182. Labeling of Coffees Produced in the Dutch East Indies.

In view of the shortage of Java coffee the bureau has been requested to advise whether mixtures consisting of Java and Sumatra may be labeled as Java coffee. As stated in Food Inspection Decision 82, coffee grown in Sumatra may be labeled either as "Sumatra" or as "Dutch East Indian" coffee. The bureau regards as misbranded mixtures of Mocha and Sumatra coffee if labeled as "Mocha and Java" coffee.

183. Imported Wines Fermented in the United States.

Wines imported from foreign countries in casks or barrels and thereafter fermented in bottles in the United States, in the opinion of the bureau, should be labeled so as to show that the wines are fermented and bottled in the United States.

184. Examination of Tomato Products.

The Department of Agriculture has been requested to inform manufacturers and dealers in tomato products of the tests which it applies in arriving at its decision whether to recommend proceedings under the Food and Drugs Act against tomato products.

Under section 7 of the act, articles of food are adulterated if they are found to consist in whole or in part of filthy, decomposed, or putrid animal or vegetable substances. In Circular 68 of the Bureau of Chemistry there were announced the numbers of yeasts and spores, bacteria, and molds which, in the opinion of the department, may ordinarily be found in tomato products handled with reasonable cleanliness in the process of manufacture. Examination of a large number of tomato products and tomato canneries convinces the department that it is entirely practicable for manufacturers to keep the yeasts and spores, bacteria, and molds within the limits stated in Circular 68. Though the department has not recommended proceedings under the Food and Drugs Act unless the product, upon examination under the conditions prescribed in Circular 68, was found to contain yeasts and spores, or bacteria, or mold filaments in excess of the following numbers: Yeasts and spores per 1-60 cubic millimeter 125; bacteria per cubic centimeter 100,000,000; mold filaments in 66 per cent of the microscopic fields, it is considering the adoption of figures approaching those given in Circular 68. When such a scale has been adopted public announcement will be given.

Since Circular 68 was issued there are being produced in increasing quantities tomato products of varying degrees of concentration. The department is considering the adoption of a scale for testing tomato products, varying with the degree of concentration. If it is decided to adopt such a scale, public announcement will be given.

185. Importation of Crude Peppers.

It has been represented to the department that crude peppers are ordinarily sold in the markets of the world on the basis of recognized commercial grades, and that all peppers contain light berries in varying quantities, and that peppers as picked and cured in the countries where grown contain small percentages of dust, including within the meaning of that term stalks, stones, clay, and other foreign matter. It is not the intention of the department, until notice to the contrary is given, to recommend the detention of crude peppers offered for entry in the same condition in which picked and cured in the countries where grown which conform to specified commercial grades, provided the peppers are found upon examination not to be wormy or otherwise to consist in whole or in part of a filthy, decomposed, or putrid substance, or in any wise to be injurious to health. On the other hand, the department will continue to recommend that importations of crude peppers be detained if upon examination they are found to be wormy or otherwise to consist in whole or in part of a filthy, decomposed, or putrid substance, or in any wise to be injurious to health, or do not conform to a specified commercial grade, or to contain pepper shells or other added adulterants.

Ground peppers will be regarded as adulterated and misbranded if upon examination they are found not to comply with the definitions and standards in Circular 19, Office of the Secretary of Agriculture.

186. Added Water in Lard Substitutes an Adulteration.

Compounds and other lard substitutes containing added water are regarded as adulterated under the Food and Drugs Act, even if the added water is declared on the label.

187. Labeling of Grape Juice and Loganberry Juice.

Sugar added to grape juice, loganberry juice, or other fruit juices, should be declared upon the label. Articles labeled as "grape juice," "loganberry juice," or as the juice of any fruit, are adulterated if they contain added water.

188. Cereal in Sausage Seasoning.

It has come to the attention of the bureau that cereal is sometimes added to the mixture of spices sold as sausage seasoning. Cereals are not spices and are not recognized ingredients of sausage seasoning. Articles labeled or sold

as sausage seasoning which contain added cereal, are considered to be adulterated and misbranded, unless the articles are plainly labeled so as to show the presence of cereal.

189. Labeling of Whitefish and Lake Herring.

Questions regarding the proper labeling of certain fish, to which Food Inspection Decision No. 105 relates, have been referred to the Bureau of Fisheries, which has furnished the following information:

The genera *Coregonus* and *Leucichthys* (formerly *Argyrosomus*) both belong to the whitefish subfamily (Coregoninæ) of the family Salmonidæ.

The genus *Coregonus* in the Great Lakes, includes the common whitefishes, *C. albus* of Lake Erie, *C. clupeaformis* of the other lakes, and *C. quadrilateralis* or Menominee.

The genus *Leucichthys* comprises a number of species of various sizes and appearances, known to the fishermen by different names, according to locality and appearance. Some are called lake herring, bloater, cisco, long-jaw, etc., and there is a black-fin (*L. nigripinnis*) in Lake Michigan and a blue-fin (*L. cyanopterus*) found in Lake Superior.

The members of the genus *Leucichthys* are all entitled to the name lake herring, and the members of the genus *Coregonus* may be called whitefish.

190. Use of Word "Maize" for Other Grains.

Information has been requested as to the application of the word "maize" to milo, kafir, and feterita. It is the opinion of the department that the word maize is not applicable to kafir, milo, and feterita, but that these products are all included under the general name of "grain sorghum." Milo should be referred to as "milo" and not as "milo maize." Kafir should be referred to as "kafir" and not as "kafir corn."

191. Cottonseed Meal and Cottonseed Hulls Containing Salt.

(Supplementing Item 176 in S. R. A., Chem. 17.)

It has come to the attention of this bureau that item 176, Service and Regulatory Announcements, Chemistry 17, has been construed by members of the cottonseed trade as meaning that common salt even in small quantities, when mixed with cottonseed meal or hulls, is considered injurious to animals. Just what proportion of salt can be fed with these products without deleterious effect has not been determined, but pending a further investigation of this question the bureau will not object to the presence of salt in small quantities in cotton seed or cottonseed products, provided they are labeled to show that salt is present.

192. Suggested Procedure for the Commercial Denaturing of Eggs, Egg Yolk, and Egg Albumen.

Eggs to be denatured should first be broken out and placed in a barrel or similar container.

Add 2 per cent, by weight, of birch tar oil or of power distillate. Thoroughly mix the eggs and denaturant in a revolving drum or barrel churn for 10 to 15 minutes, or, in the absence of a mechanical apparatus, stir with a paddle or mixing ladle until the denatured product is uniform in appearance. This will require 10 to 15 minutes constant stirring.

Salt may be used, in addition, for preserving or for further denaturing tanners' egg yolk.

For denaturing dry egg albumen, add 13 per cent, by weight, of birch tar oil or of power distillate, and mix until the mass is uniform. This amount of denaturant is equivalent to 2 per cent on a basis of liquid albumen containing about 85 per cent of water.

193. Cheese in Package Form.

The bureau is of the opinion that the Net Weight Amendment to the Food and Drugs Act requires that the quantity of the contents shall be plainly and conspicuously marked upon the following-described packages of cheese:

Domestic.

American cheeses of the cheddar type: Boxes or drums, containing from 1 to 4 cheeses, according to size, cheddars, twins, daisies, two daisies, long horns and young Americans, sage, spiced, and pimento in daisy and young American styles.

Camembert type: Individual cheeses packed in boxes.

Potted: Jars, and cartons inclosing such jars, containing luncheon or club, pimento, Roquefort, Parmesan and other varieties.

Cottage and other varieties of soft cheeses packed in paraffined paper pails.

Philadelphia cream, Isigny type, luncheon, pimento, snappy, and other varieties, wrapped in paper or in paper and metal foil.

Individual wrapped domestic cheeses of the Neufchatel and Brie types.

Individual cheeses of the brick and Limburger types when wrapped in paper, with or without foil or paraffin coating.

Pineapple: Boxes or cases containing a number of unwrapped units.

Hand Käse: Boxes or cases containing a number of unwrapped units or units loosely wrapped in muslin or paper.

Münster: Individual cheeses wrapped in paper.

Imported.

Edam: Individual cheeses wrapped, covered with tinfoil, or packed in tin cans.

Roquefort: Individual cheeses wrapped in tinfoil and parchment paper.

Camembert: Wooden boxes or tins containing individual cheeses.

The following cheeses when prepared as described are at present considered not to be in package form within the meaning of the Net Weight Amendment, although the question is not entirely free from doubt:

Domestic.

Swiss type: In loaves weighing 100 pounds each, and packed in tubs, usually 4 loaves to the tub.

Imported.

Swiss: In loaves weighing from 100 to 250 pounds each, usually packed 4 or 5 loaves to the tub.

Edam: Unwrapped.

Sap Sago: In casks containing about 225 pounds; or half casks containing about 100 pounds.

Reggiano or Roman: Unwrapped, packed 4 loaves to the tub, each loaf weighing 40 to 60 pounds.

Parmesan: Unwrapped, packed in tubs of 4 loaves, the loaves weighing from 30 to 50 pounds.

Gouda: Packed in cases containing 4 cheeses, each weighing 10 to 45 pounds.

Stilton: In loaves weighing about 12 pounds, packed in boxes.

Gorgonzola: Packed in baskets containing 10 or more loaves, the loaves weighing about 20 pounds each.

194. Unlabeled Canned Goods. (Amendment to Item 169 in S. R. A., Chem. 17.)

Until further notice, the department will not recommend proceedings under the Food and Drugs Act on account of the shipment in interstate commerce, or the sale in the District of Columbia or the Territories, of unlabeled canned foods solely upon the ground that the same do not bear a statement of the quantity of the contents, if such shipment or sale be other than to a retail dealer or to a consumer and the cans bear a correct statement of the quantity of the contents when sold or delivered to retail dealers and consumers. If investigation discloses that failure to mark the quantity of the contents on unlabeled cans affords means to defraud or to defeat the purposes of the act, it will be the duty of the department to recommend proceedings, and reasonable notice to that effect will be given.

California Fish Catch in 1915.

According to State Statistician George Robertson, there were 94,965,000 pounds of fish taken from the waters of California in 1915. The albicore made the record for the year, the twelve-month catch amounting to 30,000,000 pounds, or more than three times as much as any other fish. The striped bass catch amounted to 1,575,000 pounds and catfish 750,000 pounds. Other catches for the year were: Flounders, soles and sandabs, 9,000,000 pounds; shad, 4,500,000; salmon, 7,000,000; sardines, 7,500,000; rock fish 5,500,000; California halibut, 7,050,000; perch, 208,000; smelt, 1,500,000.

American Packers in Convention at Cincinnati

Tenth Anniversary of the Founding of the Association
Marked by a Meeting of Magnitude and Importance

MORE than five hundred representatives of the greatest of food industries registered at the eleventh annual convention of the American Meat Packers' Association, held in Cincinnati, Ohio, October 9, 10 and 11, 1916. The meeting marked the tenth anniversary of the founding of the association, and proved by its interest and the attendance of members from all parts of the country that it had genuine purposes and an influence beyond computation for the well-being of trade. In its proceedings there was much of value to the general public, and at no time the expression of a desire or intention that did not harmonize with the advance of knowledge and co-operation for the best interests of all the people.

Fred Krey, of St. Louis, president of the association, called the first session of the convention to order at 1:30 Monday afternoon, and invited Gen. Michael Ryan, the first chosen head of the organization, to come up from the floor of the assembly and sit beside him on the stage.

Mayor George Puchta welcomed the delegates to the city in a brief address that was cordial in tone and phrase, and picturesquely loyal in its summary of Cincinnati's attractions. In praise of organization, he told this little story:

"A stage driver had a passenger on the seat with him one day, and as they went along, displayed his dexterity with the long whip, reaching out to strike various objects at the roadside, a leaf or blossom, even a bug on a projecting tree limb. He never missed his aim, and he allowed no fair mark to go by without notice. But one seeming opportunity was neglected, and the passenger asked, 'Why don't you hit that?' 'O no,' said the stage driver, 'that is a hornets' nest; that is organized.'"

President Krey's address summing up the progress of the year was concise but comprehensive. He mentioned the advancing cost of growing livestock, which has reached a pitch never known before, and the necessity for scientific methods and close calculation to prevent losses that would result in even higher prices to the consumer.

"No vigorous attempt has been made to exterminate tuberculosis and other infectious and contagious diseases, except the hoof-and-mouth disease," he said, "though the United States Department of Agriculture estimates the economic loss from this source at \$250,000,000 per year. If only half of this vast sum were saved in meat food animals, every meat price would be reduced because of the additional supply."

The executive committee presented a statement which set forth present conditions, difficulties, and prospects in an impressive and convincing manner. Freight rates, political attacks on the industry generally, and the great losses occasioned by preventable diseases among meat food animals were discussed. Three very important points were made in these concluding paragraphs of the paper:

"We say to the public that American meat packing plants are equipped to take more animals for slaughter than we are receiving. Livestock has not been produced in this country in proportion to the increase in population. Apparently the farmers have thought that it was more profitable to sell their wheat, corn, oats, rye and other feed-stuffs in a bag than in a steer or hog.

"At the prevailing high prices for all kinds of meat animals, this is not true. There has never been a time in the history of the country when prices for all meat animals were as high as they have ranged during the last six months. There is one point which farmers generally do not seem to have considered in comparing the return for their grain and other feed-stuffs, when sold as such, with what they can realize through feeding them to livestock, and that is

the increased soil fertility which follows the raising of livestock.

"The housewife should do her meat buying personally and know what she is getting and what she is paying for. The efforts of the various State and Federal bureaus to encourage the production of more and better livestock on every farm should be actively supported. These have made great strides in the last few years, and it seems that farmers generally are paying more attention to this very important side of the business of farming."

Treasurer Max N. Agger made his report, showing receipts of \$9,288.82 during the year, and disbursements amounting to about the same figure.

The committee to confer with government officials and the committee on checking livestock disease made reports which showed active attention to matters in hand, and offered practical suggestions.

Arthur S. Pickering, of Cleveland, president of the United Master Butchers of America, was introduced, and spoke on present-day problems in retail meat marketing.

Dr. Andrew M. Soule, president of Georgia State College of Agriculture, made a thoughtful and informing address on "The South as an Important Factor in Increasing Our Meat Supply." He described an empire in extent and resources which is well known to but few and fully appreciated by none. Marvelous progress is being made in livestock growing in several of the Southern states, and even greater advancement will be made when more attention is diverted to this industry from the old-time crops of the region. Georgia, last year, took ninth place in hog raising, a fact that surprised growers and packers throughout the country. There are nearly 200,000,000 acres of land in the South that could be utilized for range purposes. In climate and diversity of products adapted to forage purposes, there is no part of the country that can rival this region.

E. H. Uhlmann, president of the Chemical and Engineering Company, Chicago, spoke on "Chemistry as Applied to the Packing and Allied Industries." He indicated many of the details of the packing industry, important in economy, which depended on chemical research and knowledge for their best systemization and turning to use, and asserted his faith that the dependence of the business on chemistry would increase in the years to come.

Gen. Michael Ryan was called on for a speech, and complied, summing up with wisdom and humor the advance of recent years, the triumphs over manifold disadvantages, and the hope that inspired courage in facing the future.

During the sessions of the second day, W. B. Allbright, of the Allbright-Nell Company, Chicago, addressed the convention on "Some Interesting Facts in Connection with a New Method of Manufacturing Pure Lard." The address is given in full elsewhere in this number of THE AMERICAN FOOD JOURNAL.

F. M. De Beers, president of the Swenson Evaporator Company, Chicago, read a paper on "The Development of Our Potash Industry," which showed recent progress made by the chemists of the country working in this line, and present conditions. Mr. De Beers said that he believed at least one-third of our needs next year would be met by the domestic production of raw potash salts, with a possibility of much greater success. He considers that the future of the industry rests in its success with feldspar, alunite, blast furnace gases, and natural deposits in Nebraska, Wyoming, and Oregon.

An interesting historical sketch of the meat trade was presented by J. J. P. Langton, of St. Louis in a paper entitled, "The Packing-House Industry as Seen by a Broker."

He traced the growth of the trade from the time when animals were slaughtered in the open air in the Forum in Rome, 300 B. C.

The committee on resolutions presented the following, which were adopted:

Enormous Loss in Meat Supply from Disease.

Whereas, it is reported by the United States Department of Agriculture that there is an annual loss of \$250,000,000 owing to the prevalence of tuberculosis, hog cholera, pleur-pneumonia, and other contagious and infectious diseases; and

Whereas, no radically effective measure has been taken by the government to eradicate these diseases, such as was done in the case of the hoof-and-mouth outbreak; and

Whereas, this tremendous economic loss has its direct reflection in the reduction of quantity of our meat food supply, and therefore a direct bearing upon prices to consumers; be it

Resolved, that the press and public be invited to consider this highly important matter, and that they urge upon Congress the necessity for saving to the people of this country this enormous quantity of meat food product, both because of the requirements of our people and because of the unnecessary loss.

Ask Government for Enough Inspectors.

Whereas, the demand for meat food products is unprecedented, and thorough inspection is necessary, be it

Resolved, that the secretary of this association be instructed to immediately request the Department of Agriculture to furnish a sufficient number of inspectors for regular and overtime operations in all packinghouses.

The reason for this resolution is that some of our packinghouses are hampered in their operations by a lack of inspectors. The demand on the packers for meat is so great at this time that we must keep our plants in continuous operation, and the natural flow of our work is being hampered because the government cannot or does not furnish enough inspectors.

Unfairness of the Oleomargarine Tax.

Whereas, the cost of foodstuffs of all kinds is constantly rising, to the great unrest and disturbance of our people, there still remains on our statute books a tax on oleomargarine, which is admitted to be a pure, wholesome and nutritious article of food; be it

Resolved, that we again call the attention of consumers to this discrimination against a government-inspected, disease-free, wholesome food product, and we urge the unfairness of a tax which is in favor of a competing manufacturer and against the consumer."

In explanation of this, it may be stated that very few of our members produce oleomargarine. Its ingredients are fats, and other things which go into its manufacture have a very strong relative position with regard to the cost and selling prices of fats, so that every member of the association is interested in the question of taxing oleomargarine and the quantity that is produced, because if the production of oleomargarine was increased, you have an increased market for your fats.

Against Further Freight Rate Increases.

Whereas, the operating costs of production, including transportation rates, must be included in the selling price of any article; and

Whereas, the Interstate Commerce Commission is again considering the subject of packinghouse and livestock rates; be it

Resolved, that the action of our Board of Directors in protesting against any change in existing conditions be fully approved, and that we express our conviction that no governmental body will add further burdens to our householders through this means.

Payment for Condemnations for Disease.

Whereas, the packers of the United States made an earnest, sincere and conscientious effort to co-operate with the officials of the United States government in the eradication of the hoof-and-mouth disease; and

Whereas, farmers and other owners of livestock which were afflicted were recompensed for their property, and packers were not, owing to a very technical construction of the law; be it

Resolved, that we protest against any such apparent discrimination between two classes of owners, one of which was conscientiously aiding the government while the other was not, and that we express our belief that it was the full intent of Congress that all owners of such animals, regardless of ownership and wherever found and without technicalities, should be paid for their losses in order that this disease might be eradicated.

Votes of thanks were recorded for the speakers, the hosts of Cincinnati, and others who had assisted in making the convention a success.

The obituary committee reported the following list of members who had been removed by death, and the names were inscribed on the minutes as a tribute to their memory:

John Moran, honorary member, Chicago, Ill.

Sigel Hess, Morris & Company, Chicago, Ill.

P. A. Valentine, Armour & Company, Chicago, Ill.

Gustave A. Loewenstein, A. Loewenstein Sons Company, Cincinnati, Ohio.

Herbert Barnes, New Haven, Conn.

J. B. Howell, Paine & Company, Wilkes-Barre, Pa.

James B. Fricker, Reading Abattoir Company, Reading, Pa.

Chas. A. Sterne, Sterne & Son Company, Chicago, Ill.

David M. Anthony, Swift & Company, Fall River, Mass.

Robert Morris Jones, Jones & Lamb Company, Baltimore, Md.

Milton W. Kirk, Chicago, Ill.

Emory S. Kimball, Kimball & Colwell Company, Providence, R. I.

M. Emmett Taber, Taber Pump Company, Buffalo, N. Y.

James Scanlon, J. M. & P. Scanlon, New York, N. Y.

Henry S. Robbins, National Ammonia Company, St. Louis, Mo.

James E. Quigley, Armstrong Cork & Insulation Company, Pittsburgh, Pa.

Edward Neuer, Neuer Bros. Meat Company, Kansas City, Mo.

There was no dissent from the recommendations of the nominating committee, and the secretary cast the ballot electing the following named officers for the ensuing term:

President—Albert R. Rohe, Rohe & Brothers, New York, N. Y.

Vice-President—K. Frederick Pfund, G. F. Pfund & Sons, Philadelphia, Pa.

Secretary—George L. McCarthy, The National Provisioner, New York, N. Y.

Treasurer—Max N. Agger, J. C. Roth Packing Company, Cincinnati, O.

Executive Committee—Howard R. Smith, Jones & Lamb Company, Baltimore, Md., chairman; Chas. H. Ogden, Pittsburgh Provision & Packing Company, Pittsburgh, Pa.; James B. McCrea, Ohio Provision Company, Cleveland, O.; T. W. Taliaferro, Hammond, Standish Company, Detroit, Mich.; John M. Danahy, Danahy Packing Company, Buffalo, N. Y.; Geo. Heil, Heil Packing Company, St. Louis, Mo.; W. H. Gehrmann, Kohrs Packing Company, Davenport, Iowa; Fred R. Burrows, G. H. Hammond Company, Chicago, Ill.; Otto Schenk, F. Schenk & Sons Company, Wheeling, W. Va.

Chicago packers went to Cincinnati 120 strong in a special train.

The banquet at the Hotel Sinton was a joyous event, with many features of entertainment and serious suggestion.

France Buying Our Sardines.

The French Government has its agents in Maine negotiating for the purchase of fifteen thousand cases of American sardines to be used by the French army.

Ordinarily France is among the leading sardine producing countries of the world but the war has demoralized things to such an extent that France must now come to America for these goods.

Live-Stock Marketing Conditions Analyzed

Great Central Markets of the United States and Co-Operative Associations of Cattle Raisers Are the Most Important Factors

MARKED variation in methods of marketing meat animals in different sections of the United States and in methods of marketing different classes of animals in the country as a whole has been found by specialists of the U. S. Department of Agriculture from a survey of the live-stock marketing conditions of the country. The data obtained by the survey have been published as Part V of a report of an exhaustive study of the meat situation in the United States.

The three general methods of marketing found to be in most common use are:

Shipping to the large centralized markets, selling to local butchers and packers, and the sale of farm-prepared meats to dealers or consumers. The bulk of the animals from the Central States, it was found, is sold through the centralized markets, while some form of local marketing predominates in the extreme eastern, western and southern sections.

The great central markets handle four-fifths of the sheep and lambs, two-thirds of the hogs, and approximately one-half of the beef cattle. For local slaughter about one-third of the beef cattle, one-eighth of the sheep and lambs, and one-twelfth of the hogs are sold. Nearly one-third of the hogs and about one-tenth of the beef cattle and one-twentieth of the sheep and lambs are slaughtered on farms and ranges. Relatively more sheep are shipped in carload lots by owners than any other class of live stock. Cattle, hogs, and calves follow in the order named. In sales to local buyers hogs lead, with calves, cattle, and sheep following in order.

The study discloses that the time of buying stockers and feeders and the selling of finished animals is restricted too generally to a few months of the year. Should stock-feeding operations be better adjusted to market conditions, a decided influence toward a more even distribution of the supply would be the result.

Co-operative associations of cattle raisers are becoming an important factor in marketing, the report shows. Seven hundred and fifty organizations which market cattle in a co-operative way now exist in 15 states. Four hundred and thirty of these organizations are primarily live-stock shipping associations. The greatest activity of this sort was found in Minnesota, where 215 co-operative live-stock shipping associations are located. The Department specialists declare that these associations bring greater returns to the farmers because of the reduction of marketing expense and the realization of the prevailing prices at the centralized markets, and that they are also valuable because of their educational features.

Stockyards and Packing Establishments.

The system of centralized live-stock markets in the United States is the largest single factor in the marketing of meat animals. It is noteworthy that this system is peculiar to the United States, no other country having developed such markets for their live stock. Not only is live stock sold for slaughter at the centralized markets, but a large proportion of stocker and feeder cattle also passes through these market centers.

The chief outlet for food producing animals in this country, the study discloses, is wholesale slaughtering and meat packing. Such industries usually are associated with the great centralized markets. More than 1,200 slaughtering and meat packing establishments were operating in the United States in 1914, and turned out products worth \$1,651,765,424. The specialists report that one of the striking features of the industry is the concentration of ownership. Packing establishments buy directly from the producer in California to a greater extent than in any other state or section. This practice, which in the opinion of the specialists will continue to be important in those parts of the country remote from cen-

tralized markets, is most characteristic of the western group of states in general. There is a decided difference of opinion among producers, marketmen, and packers as to the effects of this practice in sections supplied with central markets on the general market prices of live stock and on the prosperity of cattle raisers.

Municipally owned or controlled abattoirs are becoming increasingly important in the local marketing of live stock, the report shows, and are displacing rapidly the old type of slaughterhouse. Public abattoirs have been established in 22 cities and 13 states. Local conditions should determine whether or not a city should build its own abattoir, and a thorough examination of conditions, therefore, should be made before definite action is taken.

Great variations were found to exist in the losses of and damage to live stock in transit on different railroads. On one road the claims paid amounted to 19 per cent of the revenue during a certain period, and on another to less than 5 per cent. The total claims for such loss and damage in 1913-1914 on 27 railroads were \$1,245,477.81. The average rates on live stock for the years 1911 to 1913 were found to be 10 cents per hundred pounds for eastern or official territory, 11.9 cents for southern territory, and 14.9 cents for western territory.

The correlation between average live stock and meat prices over relatively long periods is closer than is generally understood. When the price of live stock rises or falls, meat prices tend to change in the same directions, but the meat prices are not subject to abrupt daily fluctuations, which are one of the most adverse features of live stock market conditions.

Market Returns.

In order to secure information as to the relative cost of the different factors or steps in the processes of marketing animals and the proportions of the final price reaching the farmer and other parties to the transactions, the specialists traced several typical lots of beef cattle from producer to consumer, both through centralized markets and where the animals were disposed of locally. In the former case the farmer's share of the gross returns ranged from 5 per cent to 85 per cent, while from 2 per cent to 5 per cent went to pay market expenses, 2 per cent to 9 per cent were received by the packers, and 8 per cent to 33 per cent by the retailers. In the local sales, from 62 per cent to 84 per cent of the gross returns was received by the farmer and from 15 per cent to 38 per cent by the retailer. The detailed figures indicate, however, that even when account is taken of the fact that lower grade stock is sold locally the returns from such sales are not as great relatively as those from sales through centralized markets.

A Jersey Cow Special Train.

At the close of the Waterloo, Iowa, dairy show the exhibitors of Jersey cattle sent their exhibits to the National Dairy Show at Springfield, Mass., by special train. One hundred and sixty-eight Jersey cows and bulls were loaded into ten palace stock cars and carried to Springfield, making stops of one day each at Indianapolis, Ind., Columbus, Ohio, and Utica, New York—each city the center of a great dairy section.

Dairy celebrations were held in each city, the speakers including the governor of the state, the mayor of the city and notables in the dairy world. It was a novel plan for calling public attention to the Jersey cow, and officers and directors of the American Jersey Cattle Club, of which M. D. Munn, of St. Paul, Minn., is president, are to be credited with the success of the undertaking.

Patents and Copyrights

The following patents of interest to readers of this journal recently were issued from the United States Patent Office. Copies thereof can be obtained from R. E. Burnham, patent and trade-mark attorney, 882 Bond Building, Washington, D. C., at the rate of 20 cents each. State number of patent and name of inventor when ordering.

1,199,124. Food products. Walter O. Snelling, Pittsburgh, Pa.

1,199,184. Fruit-grader. Julius Hubmann, North Yakima, Wash.

1,199,457. Process for producing jelly. John S. Ellithorp, Jr., Palatine Bridge, N. Y.

1,199,853. Egg-box. Elmer E. Yoho, Lincoln, Neb., assignor, by mesne assignments, to National Egg Carrier Co.

1,199,929. Bake-oven. John Scheer, Seattle, Wash.

1,200,424. Coffee-roasting device. Martin S. Kenny, New Orleans, La.

1,200,428. Dough-product-cutting machine. Edward E. Lawrence, Cambridge, Mass., assignor to Loose-Wiles Biscuit Co., Kansas City, Mo.

1,200,449. Sausage-canning machine. August M. Augensen, Maywood, Ill.

1,200,705. Machine for manufacturing chocolate confectionery. William Boyd, Claremond, West Ferry, Scotland.

1,200,775. Orange-drier. James W. Stevenson, Riverside, Cal.

1,200,782. Apparatus for manufacturing milk. Gustav von Rigler Klausenburg, Austria-Hungary.

1,201,027. Process of extracting milk-sugar from whey. John G. Dietrich, McMinnville, Ore.

1,201,062. Process of manufacturing yeast. Lucien Lavedan, New Orleans, La.

1,201,357. Manufacture of fondant. Peter H. Schlueter, Chicago, Ill.

1,201,510. Popped rice and process of making it. William B. Schuyler, San Francisco, Cal.

1,201,552. Method of preparing fish for transport. Henrik J. Bull, Bergen, Norway.

1,201,573. Process for the manufacture of chocolates. Jakob Gloor, Rutherglen, Scotland.

1,201,775. Egg-carton. David Tufts, Pittsburgh, Pa.

1,201,776. Machine for mixing or working up dough and other materials. Arnoldus A. Verhoeven, Tilburg, Netherlands.

1,201,825. Method for making hollow sweetmeats and the like. Ernst Huther, Saalfeld-on-the-Saale, Germany.

Reducing the Cost of Beef Production.

The more beef the American farmer can produce at a reasonable profit the better it will be for his land, because beef production tends to maintain fertility. From the standpoint of supply and demand there is no reason why beef production should not be profitable for a long period of years. It is a well-known fact that the cattle in the United States, exclusive of dairy stock, decreased from 50,000,000 head in 1900 to 37,000,000 in 1915, while during the same period the population increased from 75,000,000 to 100,000,000. In other words, while our beef cattle decreased 13,000,000 head, our population increased by 25,000,000.

It is true that in spite of this condition and in face of the additional fact that European demand greatly increased our beef exports in 1915, the producer was unable to obtain profitable prices for his products last year, and much complaint was heard. Beef values have now returned to a profitable basis from the producer's point of view, and there are indications that there are better times ahead for the producer than there have been in the past.

Beware of the mail order fakir and the cure-all quack, for verily they are wolves in sheep's clothing.

Central Cold Storage Company's New Warehouse.

By invitation (and the letter was handsomely engraved and bore a fine photogravure of the projected building) a large number of the produce dealers, pioneer cold-storage men, and other interested guests assembled at the southwest corner of Dearborn and Kinzie streets, Chicago, on October 9, and witnessed the laying of the cornerstone of the new warehouse now being erected by the Central Cold Storage Company.

L. B. Kilbourne, president of the company, presided at the exercises, which were opened by the invocation by the Rev. Wm. T. McElveen, Ph.D. The Oriental Quartette sang an inspiring selection. Horace Wright Cook, treasurer of the company, then gave a sketch of the enterprise, with a few impressive details of the purpose, magnitude, and advanced scientific equipment of the building. Mr. Cook gave the credit for the idea now being made material to Frank E. Roth, the secretary of the company, and his address was more than a model of concise statement, for it was illuminated by high purpose and eloquent in form and expression. Secretary Roth read the list of contents of the copper casket which was imbedded in the cornerstone, which included records of the company, of various trade organizations represented, and copies of daily and trade papers. President Kilbourne was presented a silver trowel, suitably inscribed, as a memento of the event, and with the masonic implement fixed the cornerstone in the place made for it. The quartette sang another song; Frank A. Horne, president of the American Association of Refrigeration, made a brief address on the advancement of the science of refrigeration and cold storage, and with another musical selection the exercises were concluded.

The new warehouse, the steel frame of which is now in position, will be the largest single unit cold storage plant in the world. Its foundations were sunk 105 feet to solid rock, there are 4,000 tons of steel in its frame, and it will contain 5,000,000 feet of storage room. Railway tracks run into the basement of the building, to give shipping facilities, and there is room for 21 trucks to load or unload at its receiving platforms. About two hundred produce and commission merchants of Chicago are stockholders in the enterprise.

Net Weight Decision in the State of Washington.

At Walla Walla, Wash., this month, H. A. Brown was charged with a violation of the net weight law in selling wrapped bacon. The suit came up in the superior court, and on hearing the evidence Judge E. C. Mills directed the jury to return a verdict of not guilty. It was shown that Brown did not weigh the bacon or have the invoices, which were made out at Spokane. The case attracted much attention, as it was a test case under the state law.

Packers' Voluntary Wage Raise.

A number of the leading meat packing concerns of the country early in October announced a voluntary raise in wages of their employees amounting to an average of 2½ cents per hour. This raise applies particularly to plant employees and extends over the entire country. Even the Chicago packinghouse teamsters, who are working under a contract which still has a long term to run, will receive the increased wage. The packers say the employees work hard and faithfully, and deserve the increase.

The advance is said to amount to an increase in payrolls of \$25,000 a day, or more than \$7,000,000 a year. The concerns involved include Swift & Company, Armour & Company, Wilson & Company (formerly the Sulzberger & Sons Company), Morris & Company, Libby, McNeill & Libby, Omaha Packing Company, G. H. Hammond Company and others.

Domestic Crop of Chestnuts Small.

The crop of domestic chestnuts promises to be unusually light this year, and the nuts will be small. R. N. Stevens, of Stevens Bros., the largest handler of chestnuts in the Baltimore market, expressed the belief that this year's crop would be lighter than that of many years.

THE WHOLESALE GROCERY FIELD

ALL THE MANUFACTURING AND JOBBING NEWS WORTH PRINTING

Dawson Bros., pickle and preserve makers at Memphis, Tenn., and Dallas, Texas, went to Atlanta, Ga., in July, 1915, and bought at bankrupt sale a run-down plant. In a little more than a year they have built up a business that will amount to \$250,000 this season. They employ 100 people and work night and day during the rush of the fruit-harvesting period. Large quantities of cucumbers and apples are bought that were a total loss to growers before the factory opened.

Wilson & Co., the meat packers, have a big plant in Natchez, Miss., and October 12 was made a special day there, when many visitors from near and far were entertained. Every attention was shown the guests by Superintendent R. D. McKee and his assistants. J. M. McInerney, who is in charge of the buying department, has established good relations with all the shippers of the southern Mississippi Valley.

Bishop & Co., chocolate, candy, and cracker manufacturers, of Los Angeles, Cal., are about to erect a new building, 100x260 feet, six stories and basement, to house the activities of the business. The structure when completed, next August, will double the facilities of the firm. It will contain a cold storage plant, and steam power plant. A restaurant and roof garden for employees are attractive features of the plan. The business, started in 1887, is a copartnership, with W. T. Bishop, Roland P. Bishop, and J. O. Koepfli as members.

The cattle which won the grand champion sweepstake prize at the American Royal Live Stock Show at Kansas City were recently on view in the form of attractive quarters at the branch house of Wilson & Co., 837 Callowhill street, Philadelphia, Pa. The disposal of the fifteen fat Hereford steers was the feature of the cattle sale of Kansas City. The steers weighed 1,200 pounds each and sold at \$180 per head. This was a record price of \$14.10 per hundred pounds on the hoof, and represented a jump of \$1.85 a hundred pounds for Royal fat steers. The steers came from the ranch of A. E. McGregor, Washington, Kan.

The North Alaska Salmon Company of Seattle has been incorporated with a capital of \$700,000. The incorporators are D. W. Branch of Seattle, and Philip Larmon, Henry Hardy, Harry Williams, and Henry J. Aaron, of Chicago. The company was formerly owned by San Franciscans and had its headquarters in San Francisco.

Sears and Nichols Canning Company of Chillicothe, Ohio, with factories at Chillicothe, Frankfort, Morral, Ashville, and Amanda, in Ohio, and at New Castle, Indiana, and Pentwater, Michigan, have bought five more plants, the property of C. E. Sears & Company. The new chain of packing houses acquired is made up of factories at Circleville, Washington Court House, London, Stoutsville, and Canal Winchester, all in central Ohio. The deal represents an investment of \$250,000. The Sears and Nichols Canning Company has \$1,000,000 common stock and \$500,000 of 7 per cent preferred in its capitalization. F. M. Nichols is president; W. J. Sears, first vice-president and general manager; Clarence H. Sears, treasurer; J. H. Birnie, secretary.

Buttermilk powder, milk powder, cheese, cream and eggs will be distributed to the trade in the midwest by the Omaha Dry Buttermilk company, which has filed articles of incorporation for \$10,000. The company is headed by David Cole,

as president; Herman Frankel, vice president; R. A. Stewart, treasurer and general manager; George W. Stewart, secretary, and J. F. Moscrop.

O. C. Mosley, who recently resigned as advertising manager of Libby, McNeill & Libby, Chicago, will take charge of the advertising department of the American Sugar Refining Company, New York, on November 15. He succeeds E. Y. Crossmore, who has assumed other duties with the same company.

Articles of incorporation of the Omaha Pasteurized Milk company, headed by the same men, have been filed. The company has a capital stock of \$25,000.

Dried fruit packers are now packing large quantities of their products in tins and are finding a strong demand for fruits in packages of this kind. Prunes are being given special attention and the five-pound size is proving to be especially popular. The fruit is being packed dry in most instances, although some packers are offering canned prunes in syrup, ready for the table.

The Stevenson Co., wholesale grocers, Fairmont, W. Va., are a new concern with capitalization \$300,000. John B. Stevenson, of Huntington, will be at the head and interested in it will be several influential men of Fairmont. Mr. Stevenson is head of the Stevenson Co., of Huntington.

C. P. Hale, of San Francisco, formerly connected with the North Alaska Salmon Company, which was purchased recently by Libby, McNeill & Libby, has purchased the controlling interests in the Alaska Salmon Company at a price said to be nearly \$500,000. By this purchase control is secured of the bark Emily F. Whitney and the barkentine S. W. Wilder, together with canneries at Nushagak and Kvichak.

McMurray Bros., the largest manufacturers of sorghum molasses in Western Kentucky, are now harvesting and making up thirty acres of this product. The thirty acres will make about 3,000 gallons of sorghum.

At the fortieth annual meeting of the Boston Wholesale Grocers' Association George B. Tobey was elected president to succeed Wm. M. Flanders, whose administration of two years advanced the interests of the organization, and through it the welfare of the New England Wholesale Grocers.

In an address at the last regular meeting of the Jacksonville (Fla.) Wholesale Grocers' Association, W. G. Upchurch, secretary of the organization, called attention to the fact that the general public appeared to hold the idea that the association was formed primarily to uphold prices, that the meetings were of a secretive character and that the motives of the members were more or less selfish. He advocated publicity as a means for dissipating this erroneous impression and pointed out the good results achieved along this line by the recent publication of the association's activities in promoting the growing of the black-eyed pea in that state, stating that he had received scores of communications from all parts of the state asking for further details. He asserted that this kind of publicity was of extreme value to the association.

G. W. Hume & Co. packed over 100,000 cases of fruits at its plant at Turlock, Cal., during the season just closed, more than 80,000 cases having been peaches, with the rest divided

between pears and apricots. The plant will be overhauled this winter and the capacity materially increased. Efforts are to be made to interest growers in the cultivation of asparagus, as it is desired to handle this vegetable.

The Cocoanut Products Corporation of New York will erect a large plant at Baltimore. The buildings and equipment will cost about \$340,000.

Libby, McNeill & Libby have purchased the Koolau Fruit Company, Ltd., of Honolulu, T. H., thus materially expanding their pineapple canning interests. The fruit company was owned by the Hawaiian Pineapple Company, Ltd., of which James D. Dole is president and manager, and its fruit has been handled by Libby, McNeill & Libby for some time. With this sale the Hawaiian Pineapple Company closes its interests on the windward side of Oahu and will concentrate its energy on its other properties.

The members of the American Spice Trade Association passed favorably on the question of amalgamating with the Flavoring Extract Manufacturers' Association at its recent meeting and the directors were empowered to proceed with the merger, providing the details can be satisfactorily arranged.

The National Wholesale Grocers' Association has completed its poll of the members for ascertaining their views on the subject of whether the national bankruptcy law should be amended or wholly repealed, and finds opinion so widely divided as to make highly undesirable the association taking any active stand on the subject. Such is the conclusion reported in the latest issue of its bulletin.

Cameron R. Rust, president of the Rust-Parker Company, wholesale grocers, of Duluth, Minn., died suddenly Sept. 20, aged 48. Mr. Rust was formerly a resident of Waukesha, Wis., and was in business in Marshfield and in Superior before settling in Duluth. G. G. Hartley has been elected president of the company, to succeed Mr. Rust.

A. G. Hambrock, secretary of the United Grocers' and Butchers' Association, has resigned his position and will go on the road as a salesman for the Morton Salt Company.

According to a report from Paris, the French Government is contemplating placing a tax on heavy eaters. A measure has been introduced which imposes a tax of 5 per cent on diners who eat more than one dollar's worth at the public restaurants at one time.

Calvin Favorite, prominent in the meat-packing industry in Chicago for many years, died October 8, aged 75. Mr. Favorite entered the employ of Armour & Co. in 1871 and later became a member of the board of directors of the firm. He represented the Armour interests on the board of trade for a long term.

According to late advices from the American Consul General at London, England, the British government has placed an embargo on the importations of oranges except on those coming from British possessions.

Earnings of the National Biscuit Company for August showed an increase of 30 per cent over the corresponding month last year. The gains in earnings were made with practically no increase in prices of the company's goods.

One of the most important deals, involving the canned milk industry of the Pacific coast, has just been consummated in the sale of the properties of the Mt. Vernon Cream Company. This is one of the largest canned milk concerns in the Northwest. It was owned largely by John B. Agen, of Seattle. He sold to Charles E. Peabody and associates. Mr. Peabody is a steamship man, but has extensive outside interests. Mr. Peabody is said to have paid \$1,000,000 cash for the properties. The Mt. Vernon Cream Company had two large modernly equipped plants, one at Mt. Vernon, and the other at Ferndale, Wash. There are rumors that Mr. Peabody purchased the company for the Libby, McNeill & Libby interests. It is also reported that the Borden people had a hand in the deal. The Borden, however, have a cannery not far from Seattle. Mr. Agen has been only about ten years building up the Mt. Vernon Cream Company. He was for many years a prominent butter and egg commission man.

Markets of the Month

Food Staples—Movements and Conditions—
Indications of the Future.

Sugar.

The close of October finds prices still advancing and the market strong. In New York on October 27 refined reached a basis of 7.50@7.75, with only one big refining company quoting the lower figure.

Within the past few weeks two factors of unexpected importance and undeniable influence upon the course of prices have made their appearance. One of these has been the steadily growing congestion of railway traffic and the consequent serious shortage of cars to move sugar as well as many other commodities. With supplies at low ebb in important jobbing centers the lack of freight cars is of much more serious import than it would have been with jobbers' and wholesalers' stocks at their normal levels, and in some sections a veritable sugar famine has been threatened in consequence.

A second unforeseen factor affecting the market situation is the unusual delay in getting the beet sugar campaign under way. Factories in all parts of the country from the Rocky Mountains east have been from ten days to two weeks behind their usual schedule in starting slicing operations, while in certain sections low acreage yields of beets point to the possibility of a considerable decrease in production from earlier estimates.

These two factors—the lack of facilities for the prompt movement of sugar and the lateness of the beet sugar season—have worked together to prevent the home-grown sugar of the central and far western states from exercising its usual influence upon eastern markets. With a larger output of beet sugar during October and with facilities available for the prompt movement of such sugars to all markets, the course of prices during the month undoubtedly would have been different.

Consumers in central and western territory have benefited strikingly in one respect from the arrival of beet sugar, even though in smaller quantity than usual, upon their markets. Except for its presence the shortage of cars on all the principal railway lines would have caused many communities in this territory to go without sugar or to bid up prices far above present levels.

Coffee.

At present prices coffee is the cheapest food commodity in the market. The market has been only fairly active, with slight fluctuations.

Minford, Lueder & Co. say: The demand has been less active, with prices lower, influenced by arrivals and cheaper cost and freight offers from Brazil. Although some of our most reliable exporters estimate the present Santos crop at 9,000,000 bags, the figures hardly warrant such a result. Up to date the receipts of the present crop are 4,756,000 bags, which seem altogether too large for a net result of 9,000,000 bags. It may be that present prices being considerably higher than last year are satisfactory to the planter and offer an inducement for pushing sales. This, however, would not make it probable that the present crop is as small as some claim, and the planter is said to be in better financial condition than usual and better able to carry his crop. The restriction of shipments to Europe is now very effective. The amount any neutral country can import is limited to actual home consumption. Only England and France have a free field. This leaves these markets and United States the only large consuming markets open, and they are at present well supplied and not anxious buyers. The above position leaves Brazil with large and accumulating stocks (although receipts are restricted) at the mercy of the few buyers in evidence, unless they can carry their stocks until buyers become urgent. Coffee prices are not high, but we can see nothing at present to advance prices unless reliable signs of peace appear, when a marked advance will occur.

Tea.

Slightly increased demand without notable changes in quotations characterizes the tea market. Stocks are well made up, but there are few indications of weakness in any line or in any domestic field.

Dried Fruits.

The California Associated Raisin Company will make better deliveries than announced a fortnight ago; on London layers, 100 per cent. The spot market is very firm. Currants have advanced and are held at extreme prices. The prune market is higher. In fact, all lines of domestic and foreign dried fruits are held at extreme figures.

Canned Foods.

Heavy demand, steadily advancing prices, and short deliveries on contract are features of a situation in the canned foods market which has not been paralleled in many seasons. Even the lines ordinarily in good supply at low figures have shared in the soaring advances that developed early in leading specialties.

Spices.

McCormick & Co., Baltimore, say:

The market is fairly active, and consumption seems to be on the increase. Many standard grades are scarcer now than they have been for several months past and with two busy months ahead, it would be well to have the goods in stock.

Pepper is higher, both here and abroad. Java grades are firmer, also Lampong. Stocks in our country are not unusually large at present and the large consuming demand that is now on will have a tendency to increase values.

Red Peppers are in fair demand. Prices are somewhat easier.

Cloves are steady and in fair demand. Futures are a little easier.

Mace is in better demand at generally unchanged prices.

Nutmegs are in better demand. Present prices we consider safe.

Cassias—Saigon grades are steady and the supply is small. Batavia is in better demand at generally unchanged prices. All grades of China are firmer and in wide demand.

Gingers are in fair demand at steady prices for all grades. The spot supply is now reported very limited.

Green Ginger Root still sells fairly well at unchanged prices.

Tapioca is somewhat higher and in very active demand at present.

Paprika is in very active demand. Prices are generally unchanged. Cable quotations keep well above prices in effect here.

Seeds, Herbs, etc.—Caraway and Poppy seeds have advanced steadily during the week. Marjoram is also very much higher. Mustard unchanged. Coriander steady since last advance.

TEA IMPORTATIONS OF THE YEAR PAST.

The fourth annual report of the Supervising Tea Examiner to the Secretary of the Treasury is dated September 11, 1916, and covers the fiscal year ended June 30, 1916.

The office of Supervising Tea Examiner is conducted under the direction of the Division of Customs and Supervises the inspection of teas (T. D. 32554) offered for entry into the United States under the act entitled "An act to prevent the importation of impure and unwholesome tea," approved March 2, 1897. Expert tea examiners are stationed at the ports of Boston, Chicago, Honolulu, New York, St. Paul, Tacoma (Puget Sound), and San Francisco for the purpose of making the required inspections.

During the last fiscal year only three shipments, comprising 2,163 pounds of tea containing artificial coloring matter were offered for admission. Only one of these shipments came direct from the country of production. The amount of coloring matter in this shipment was so small as to give room for a difference of opinion as to whether it should be admitted or rejected. It was admitted upon appeal to the United States Board of Tea Appeals.

The regulations and standards prohibiting the importation

of teas containing artificial coloring matter were put into effect May 1, 1912, and their proper enforcement has reduced the offering of such teas to the exceedingly small quantity above stated. This speedy and much-desired reform has been made possible by the "Read test," which, because of its simplicity and inexpensiveness as well as effectiveness, can be used by the buyers of tea when making purchases in foreign countries, as well as by the Government examiners when the teas are offered for importation.

The year the Read test was first used, 513,633 pounds, or 0.54 per cent of the total amount of tea offered for importation, was rejected on account of artificial coloring matter. The annual percentage has decreased to the small amount rejected this year, which is practically nil. This result is the more remarkable when it is remembered that the teas which gave the most offense on account of color were the Country Green teas, produced in the remote tea districts of China. It is believed that the discontinuance of the use of artificial coloring matter is permanent, since the Chinese Government officials have made their appeals for a discontinuance solely on the moral ground that it is a deceptive practice and not on the ground that its continued use would hurt them commercially.

The following tables are self-explanatory, except in the detail of rejections, where, as is noted in a preceding paragraph, the rejection for artificial coloring applies to only 2,163 pounds of the 1,766,410 that failed to pass, the great bulk of rejected tea being held up on account of inferior quality.

Variety.	Examined. Pounds.	Passed. Pounds.	Rejected. Pounds.
Formosa Oolong	18,068,373	17,846,383	221,990
Foochow Oolong	934,741	743,759	190,982
Congou	7,701,836	6,785,194	916,642
India and Ceylon.....	35,287,430	34,992,047	295,383
Java	578,502	578,502	.....
Ceylon Green	227,367	227,367	.....
Ping Suey Green.....	9,025,535	8,963,550	61,985
Country Green	2,936,070	2,932,390	3,680
Japan	31,520,156	31,506,293	13,863
Japan Dust	2,162,272	2,145,825	16,447
Capers	16,405	16,405	.....
Scented Orange Pekoe.....	46,267	46,267	.....
Scented Canton	605,047	602,018	3,029
Canton Oolong	426,525	381,953	44,572
Total	109,536,526	107,767,953	1,768,573
BY DISTRICTS			
Boston	9,536,360	9,444,998	91,362
Chicago	14,966,002	14,874,368	91,634
Honolulu	456,890	450,089	6,801
New York	38,026,715	36,947,365	1,079,350
Puget Sound	28,768,595	28,536,369	232,226
St. Paul	2,958,452	2,933,552	4,900
San Francisco	14,823,512	14,581,212	242,300
Total	109,536,526	107,767,953	1,768,573

There were 109 protests before the United States Board of Tea Appeals during the past fiscal year, which were decided as follows: In 58 cases, or 53.2 per cent of the total cases protested, the tea examiners were sustained. In 16 cases, or 14.7 per cent, they were partly sustained, and in 35 cases, or 32.1 per cent of the total cases protested, the rejections of the examiners were reversed.

During the fiscal year covered by this report the increase over the preceding year in importations of tea amounted to more than 18 million pounds.

The statistical report reveals also the following interesting facts: Ceylon and India produced 35,514,797 pounds, or 32.4 per cent of the teas offered for importation into this country; China produced 21,692,426 pounds, or 19.8 per cent; Japan, including 18,068,373 pounds from Formosa, produced 51,750,801 pounds, or 47.2 per cent; and Java produced 578,502, or 0.5 per cent.

George F. Mitchell is the Supervising Tea Examiner, and during the year he visited all the customs districts mentioned, except Honolulu.

United States Produces Its Own Salt.

In the production of salt, the United States is independent of all other countries. The 38,231,496 barrels of salt produced in 1915 by 14 states, Porto Rico and Hawaii constituted 99 per cent of the salt consumed in the United States, and much more could easily have been supplied had the demand required it, according to the United States Geological Survey.

Trend of Prices.

The level of prices paid producers of the United States for the principal crops increased about 1.3 per cent during September; in the past eight years the price level decreased about 3.0 per cent during September. On October 1 the index figure of prices was about 27.6 per cent higher than a year ago, 19.9 per cent higher than two years ago, and 23.8 per cent higher than the average of the past eight years on October 1.

The prices of meat animals—hogs, cattle, sheep and chickens—to producers of the United States increased 4.1 per cent from August 15 to September 15; in the past six years prices increased in like period 0.9 per cent. On September 15 the index figure of prices for these meat animals was about 23.7 per cent higher than a year ago, 10.5 per cent higher than two years ago, and 22.5 per cent higher than the average of the past six years on September 15.

The price of hogs on September 15 was unusually high, averaging for the United States \$9.22 per 100 pounds, compared with \$8.61 a month before, \$6.79 a year ago, and \$7.48, the average September 15 price of the past six years.

Beef cattle averaged \$6.55 per 100 pounds, compared with \$6.51 a month ago, \$6.06 a year ago, and \$5.46, the average September 15 price of the past six years.

Sheep averaged \$6.25 per 100 pounds, compared with \$6.22 a month before, \$5.06 a year ago, and \$4.49, the average September 15 price of the past six years.

These averages are based upon reports of several thousand correspondents of the Bureau of Crop Estimates of the Department of Agriculture.

Navy Department Awards Large Contracts.

The Bureau of Supplies and Accounts, Navy Department, has announced the following awards, among others:

The Pacific Commercial Co., San Francisco, 10,000 gallons tinned catsup at \$6,290.

Haas Bros., San Francisco, 6,000 lbs. cornstarch at \$303.

The Pacific Coast Syrup Co., San Francisco, 50,000 lbs. assorted fruit jams at \$5,600.

Rome Macaroni Factory, San Francisco, 30,000 lbs. macaroni at \$1,878.

William Cluff Co., San Francisco, 500 lbs. mustard at \$391.50.

John Rothschild, 3,500 gallons cottonseed oil at \$3,493.

Pacific Commercial Co., 3,000 lbs. pepper at \$805.50. Also 90,000 lbs. salt at \$534.60.

Libby, McNeill & Libby, Chicago, 30,000 lbs. pickles in kegs at \$3,600.

The Pacific Commercial Co., 1,000 lbs. baking soda at \$38.90. John Rothschild, 300,000 lbs. sugar in sacks at a total of \$18,132; also 1,200 lbs. tapioca at \$85.44.

The Pacific Commercial Co., 2,500 gallons syrup at \$984.50.

The Jones-Thierbach Co., San Francisco, 6,000 lbs. of crated tea, in half chests, at \$1,123.20.

Western Meat Co., 4,000 gallons vinegar at \$1,036.

Hooper & Jennings, 15,000 lbs. baking soda for the Mare Island Navy Yard, at \$1,264.50.

The O. J. Weeks Co., New York, 1832 8-oz. bottles concentrated lemon flavoring extract at .6255 per bottle, for the Mare Island Navy Yard.

The O. J. Weeks Co., New York, for the Mare Island Navy Yard, 800 pounds of vanilla flavoring powder at \$486.80.

European Coffee Stocks.

The total coffee stocks in Europe on July 31, 1916, amounted to 3,555,000 bags, of which 2,877,000 bags came from Brazil and 678,000 bags from other sources. These stocks were distributed as follows, in bags: Havre, 2,376,000; Marseille, 255,000; Bordeaux, 95,000; England, 601,000, and the Netherlands, 228,000 bags.

Importations of Spanish Almonds.

Shelled almonds amounting to 3,184,758 pounds, valued at \$923,277, were invoiced at the American consulate at Malaga, Spain, for the United States during 1915, compared with 2,075,371 pounds, valued at \$705,640 for 1914.

Coffee Finds Greatest Market Here.

Coffee is one of the old world staples which has made its home in the new. Last year's crop was approximately 21,000,000 bags of 132 pounds each. Of this Brazil produced 15,000,000 bags and the rest of American producing countries yielded about 5,000,000 bags, leaving approximately 1,000,000 to come from the Far East. According to a preliminary review of the trade and industry by the New York Chamber of Commerce for its annual report of 1917, the United States leads all other consuming countries. This country has a consumption of over ten pounds per capita now and takes about one-half of the world's coffee crops.

Of these takings from two-thirds to three-fourths come from Brazil. Out of our total imports of 1,201,104,485 pounds last fiscal year fully two-thirds came into the country by way of the port of New York. New Orleans and San Francisco are the only other ports of importance through which the national coffee demand is met. New Orleans serves the Mississippi Valley territory mainly, and San Francisco handles crops derived from Central and South American sources which are most convenient to the Pacific gateways. In addition, some of the East Indies coffee finds the coast market. Largely as a result of the European war the world's coffee marketing has fallen more and more directly upon the shoulders of the United States, and the country's opportunity for a larger permanent share in this branch of international trade is one which should not be missed.

California Fruit Growers' Exchange Prosperous.

During the year ending August 31, 1916, Exchange growers forwarded 12,101,520 boxes of citrus fruit, consisting of 9,615,855 boxes of oranges, 2,407,232 boxes of lemons, and 78,433 boxes of grapefruit, or 67 per cent, of the total of 44,473 cars of citrus fruit shipped from California.

Exchange membership increased from 62½ per cent, to 67 per cent., and the Exchange handled a larger volume and a larger proportion of the citrus crop than in any preceding year.

Exchange fruit having a delivered value of approximately \$38,500,000, returned to California \$27,703,000, or 33 1-3 per cent, more than in any preceding year.

The total average selling cost was 5.65 cents per box, or 1.78 per cent, of the delivered value of the fruit. In addition there was invested in advertising 2½ cents per box for oranges and 4 cents per box for lemons.

The Fruit Growers Supply Co., handled a business of \$4,092,865.97 for its members at a cost of 85.6 cents per \$100 of business transacted, and accumulated a balance of \$159,064.64 available for refunding to members.

After an evolution of 21 years the Exchange comprises 17 District Exchanges, a total of 162 shipping associations, and maintains 77 district sales offices. On a non-capital, non-profit, co-operative basis, it renders its 8,000 members the most comprehensive and least expensive marketing service that has been developed for any agricultural crop.

Large Pack of Asparagus.

It is estimated that a total of 972,550 cases of asparagus were packed in California this year. Of this total 7,630 cases were in gallon cans, figured on the basis of 12 cans to the case, 964,920 cases being packed in the regular staple sizes of cans. This is by far the largest pack ever put out in California and will be a surprise to many of the asparagus interests in view of the fact that it was not considered probable that this year's pack would exceed 1915.

California Walnut Crop Heavy.

Figures compiled recently reveal the fact that the second largest crop in the history of the California walnut industry promises to bring direct to the growers of southern California about \$3,750,000 within the next few months. Although the yield this year is estimated at 12,150 tons, as compared with the record of 15,111 tons last year, higher prices will make the net returns to the growers about the same as for 1915.



Consular Trade Notes and Brevities



Porto Rico Produces Its Biggest Sugar Crop.

Figures just compiled by the Bureau of Property Taxes of the Insular Treasury Department show that the sugar production from the 1916 cane crop was 483,589.68 short tons. This is the largest output ever recorded for Porto Rico, an increase of 137,099.25 tons over the crop year 1915. Practically all of it has been marketed at a price that sugar men say will average $5\frac{1}{2}$ cents per pound. On this basis the crop was worth in excess of \$53,000,000.

There were 65 sugar centrals grinding during the 1916 season, according to the report, and of these 15 produced more than 10,000 tons each, 19 had an output of from 5,000 to 10,000 tons, 6 ranged in productions from 1,000 to 5,000 tons, and 25 mills produced less than 1,000 tons each.

South African Corn Crop.

As previously predicted, the South African maize crop for 1916 is expected to fall far short of the normal yield, which means that there will be none for export and possibly not enough for home consumption. It is estimated that the production in 1915 was 30,750,000 bushels, of which 7,452,000 bushels were exported and 23,298,000 bushels consumed in the country. This year's production is estimated at 21,168,000 bushels only.

The Brazilian Coffee Situation.

From all present appearances Brazil's coffee crop for this year (1916-17) will not reach the expected figure. In 1915-16 the yield was 11,744,500 bags—a total exceeded only in 1906-07, when 15,392,200 bags were produced. While for some months it was held that the crop of this year would be a notable one and would amount to over 10,000,000 bags, it is now generally conceded that it will not reach the 9,000,000 mark.

As late as June favorable weather had prevailed; the coffee trees of the State of São Paulo were in fine condition, and everything pointed to an unusually good flowering in August; but some light frost was felt in the highland districts in July, and the rains ceased, so that the August flowering proved unusually weak. Again in early September there was a slight frost. The planters in the southern states of Brazil are confident, however, that their improved methods of culture are steadily increasing the average crop of each succeeding year, although bad conditions may sometimes diminish the individual total of one particular year.

Prices appear to have been advancing steadily under the favorable predictions that were made some months ago. A singular condition is reported of prices abroad having advanced but not on a par with the advances in the State of São Paulo, so that transactions are rendered difficult. It is said that many growers in the south are holding their crop until the consumers will be forced to buy at the planters' price, and that price may go considerably higher if the droughts continue.

The stock in Santos, said to be a little over 2,000,000 bags, is not counted large for this season of the year. It is said that 25 per cent or less of this stock is what is known as "good roasting coffee," which is a very unusual situation.

Coffee freights to the United States stood in January of this year at 60 cents plus 5 per cent per bag. They gradually increased to \$2.20 plus 5 per cent, but subsequently dropped to \$1 plus 5 per cent in June and July. This was followed by an upward movement, which surprised many and which is attributed to the shortage of the grain crop in the United States and consequent demand for bottoms on the Argentine route. Freights in early September were \$1.65 to \$1.80 plus 5 per cent per bag, and on one line of steamers \$2.

The question of ocean transport charges is one which the Santos exporter looks upon with considerable dismay. Space

has to be engaged sometimes a month or two ahead, with all the attendant risks of a drop in the freight market or a fluctuation in the coffee market itself. A great many of the smaller dealers who are afraid of making pre-engagements sell their coffee cheap to stronger firms, in order to avoid this feature of the situation. All this affects the market adversely.

It is noted in Santos that a large number of the buyers in the United States are using dollar credits nowadays in lieu of the former sterling.

Zanzibar Grows Nearly All the Cloves.

The cultivation of cloves is a significant industry, in view of the fact that the islands of Zanzibar and Pemba produce fully 90 per cent of the world's supply of this spice. In 1915 the exports of this product amounted to 25,365,424 pounds, with a value of \$2,239,730. This is an exceptionally high return, and it came at a time when the purchasing power of the people was greatly in need of help. This gratifying showing for 1915 was not wholly due to heavy yields, for quantities that would have been shipped in the latter part of 1914 had been held over until 1915 because of the lack of adequate shipping facilities and the disturbed conditions then prevailing in the European markets for this crop. Of the quantity exported in 1915, 4,502,299 pounds went to the United States; 7,634,895 pounds to the United Kingdom; 1,592,766 to the Continent of Europe, and 11,525,302 to Bombay and Calcutta.

Heavy Imports of Cocoa.

The cocoa imports continue heavy due to the fact that the war forces shipments to the United States now that Germany is cut off by the embargo. The total to date this year is 1,227,288 bags, as against 1,083,308 in 1915 and 819,696 in 1914. The principal item is African 316,006 bags, with Sanchez 255,804 bags and Guayaquil 175,684 bags.

Sugar Exports from the Philippines.

The exports of sugar for July, 1916, showed a material slump as compared with those for July, 1915, namely, \$1,231,567. Inasmuch as the first six months of 1916 each showed an excess in sugar exports over the corresponding months of 1915, it is evident that the stocks on hand have become exhausted. The reverse was true for the year 1915; the early shipments were comparatively small, whereas the last half of the year saw a marked increase due to available transportation and to rising price. A comparison of prices paid for sugar during these months explains the causes of the early movement of sugar stocks during the current year. The average price of sugar for June, 1915, was \$51 per ton as compared with \$61 per ton for June, 1916. In July, 1915, the average price was \$54 per ton, whereas for July, 1916, it was \$56.50.

Conditions in Sicilian Nut Trade.

Last year's crop of almonds was about one-fourth of a normal yield, consequently there are practically no 1915 nuts left. The new crop appears very good, and prospects are that there will be a production of 350,000 bags, of 220 pounds each. Prices are weak and there is a little speculation. Quotations for September and October shipments are 100 to 115 shillings (\$24.35 to \$28) per hundredweight of 112 pounds, f. o. b. Sicilian ports.

The stock of last year's filberts has been sold out. Estimates for this year's production are 100,000 bags of 220 pounds. Speculation has been rife and prices have attained a height that it will not be possible to maintain unless the demand from the United States and other consuming countries should become more active. Germany formerly consumed one-half of the crop, and now that this market is

closed other outlets must be found. Prices quoted for October delivery, f. o. b. Sicilian ports, are 88 shillings per 220 pounds (\$9.70 per 100 pounds).

The pistachio crop is a poor one. No estimate can be given. Prices quoted are 2 shillings 9 pence (\$0.67) per pound for the 1915 crop and 3 shillings 4 pence (\$0.81) for nuts of the 1916 crop, f. o. b. Sicilian ports.

Hog Raising in Cuba.

The subject of hog raising in Cuba is treated by New Brunswick's special representative in that island as follows:

Although in Canada and other northern countries it is generally believed that tropical countries confine food consumption to fruit, rice, etc., for their principal subsistence, Cuba at least consumes large quantities of meat and other heavy foods, about \$25,000,000 worth of meat being consumed yearly, of which about half is pork, the island producing annually pork worth about \$9,000,000, and the remaining \$3,500,000 coming chiefly from the United States. Cuba should easily produce pork required for home consumption, as extensive pastures, plenty of fresh water, and abundance of wild-grown foods the year 'round are all favorable factors existing there.

"Native hogs in Cuba remain in pasture the year 'round, and their food is palmiche, or berry of the royal palm, fruit of the mango, and the guava. All of these trees grow abundantly in all parts of Cuba. They also eat the roots of the yuca, and many other wild plants. Hogs grow and thrive on this food until a few weeks before they are killed, when they are fed extra rations, consisting of cow beans, sweet potatoes, and corn, all of which yield heavy crops on Cuban soil." Very little Canadian meat is sold in Cuba.

Paris Drinks Less Wine.

Cider and beer have taken the place of wine in many Parisian households, according to figures from American consuls, which show that during August, 20,000,000 less quarts of wine were brought into Paris than in August 1915. Approximately 6,000,000 more quarts of cider and beer were brought to the city.

Coffee Freights Build Big Profits.

An indication of the unprecedented prosperity the shipping industry of South and North America is experiencing is noted in the fact that the directors of A. Companhia Comercio e Navegacao, a Brazilian concern, reported net profits of \$1,020,000 for the last fiscal year, or more than one-fourth the capitalized value of the company. The fleet of the company consists of twenty ships, with an aggregate of 50,000 tons registration. The bulk of the firm's trade has been the carrying of coffee to the United States.

Bermuda Gets Onion Seed from California.

Bermuda, island home of the onion, is calling on California for seed with which to grow the liliaceous plant of pungent taste and odor. Department of Commerce reports call attention to a Los Angeles firm having recently shipped several hundred pounds of onion seed to Bermuda growers.

Salmon Eggs By the Million from Alaska.

A shipment of 16,000,000 eggs of the humpbacked salmon was arranged for this month from Alaska by the U. S. Bureau of Fisheries. One-half the lot will be developed at Puget Sound fish stations. The remainder of the consignment will be forwarded to the New England stations in Maine, with the view of continuing the plants of this species in the streams of that state.

Plans are also being perfected for the transfer of a carload of Eastern lobsters from Maine to Washington, in furtherance of the attempt inaugurated several years ago to bring about the acclimatization of this crustacean in Pacific coast waters.

We demand pure food and drink supplied to us in sanitary containers and in sanitary shops.

Cuba's Sugar Production For Sixty Years.

The sugar crops produced in Cuba during 64 years, reported in long tons, the crop of 1916 being estimated, are stated as follows by the Louisiana Planter.

Year.	Tons.	Year.	Tons.	Year.	Tons.
1853	322,000	1875	718,000	1896	225,221
1854	374,000	1876	590,000	1897	212,051
1855	392,999	1877	520,000	1898	305,543
1856	348,000	1878	533,000	1899	345,360
1857	355,000	1879	670,000	1900	308,543
1858	385,000	1880	530,000	1901	635,856
1859	536,000	1881	493,764	1902	850,181
1860	447,000	1882	595,837	1903	998,878
1861	466,000	1883	460,397	1904	1,040,228
1862	525,000	1884	553,987	1905	1,163,258
1863	507,000	1885	631,967	1906	1,198,749
1864	575,000	1886	731,723	1907	1,427,673
1865	620,000	1887	646,578	1908	961,958
1866	612,000	1888	656,719	1909	1,513,582
1867	597,000	1889	560,533	1910	1,804,349
1868	749,000	1890	632,368	1911	1,480,217
1869	726,000	1891	819,760	1912	1,893,687
1870	726,000	1892	976,789	1913	2,429,240
1871	547,000	1893	815,894	1914	2,596,567
1872	600,000	1894	1,054,214	1915	2,582,845
1873	775,000	1895	1,004,264	1916	3,006,000
1874	681,000				

Cuba's 1915-16 Sugar Harvest Completed.

In October 11th issue of Willett & Gray's Weekly Statistical Sugar Trade Journal appears the following item relative to Cuba's 1915-16 sugar harvest.

The last central working, the "Santa Lucia," has finished grinding and the harvesting of the 1915-16 Cuba crop is now over. The dates of finishing the last five Cuban campaigns were: 1911-12, October 23, 1912; 1912-13, October 22, 1913; 1913-14, September 18, 1914; 1914-15, November 8, 1915; 1915-16, October 9, 1916. According to a special cable received from Messrs. Guma-Mejer, the final outturn of the 1915-16 Cuba crop was 3,007,915 tons, against 2,592,667 tons for the preceding crop.

Decrease in Imports of Meat.

Statistics of the domestic and foreign meat trade of the United States are given in the Monthly Service and Regulatory Announcement of the Department of Agriculture, under date of September 29, 1916. They mark a notable decrease in the imports of meats and meat products, and an increase in the number of animals slaughtered under federal meat inspection.

In the seven months ending with July, 1916, and in the corresponding period in 1915, the records of animals slaughtered under federal meat inspection are as follows:

	Cattle.	Calves.	Sheep.	Goats.	Swine.
1916.....	4,019,952	1,368,884	6,284,332	95,608	29,914,132
1915.....	3,802,753	1,123,956	6,563,686	68,547	22,775,695

Imports of food animals in the seven months ending with July, 1916 and in the corresponding period in 1915:

	Cattle.	Swine.	Sheep.	Goats.
1916.....	17,126	432	4,799	6
1915.....	56,988	3,108	21,202	21,294

Imports of meats and meat products during the same periods of seven months each:

	Fresh and refrigerated.	Canned	Other	Total w'ght.
	Beef.	Other meats.	and cured.	products.
	pounds.	pounds.	pounds.	pounds.
1916.....	32,895,988	15,714,736	865,222	514,418
1915.....	84,373,892	10,440,964	3,080,019	1,397,519

Hawaiian Sugar Laborers Share Bonus.

Four million dollars will be given as bonuses to laborers by individual sugar plantations in Hawaii in November and December, according to announcements by the Hawaiian Sugar Planter's association. The distribution follows the lines of a bonus system adopted some time ago, when it was said that the amount distributed would be based upon the price of sugar. The last distribution was in the neighborhood of \$3,000,000.

WHY SACCHARIN WON

The Long, Contested Suit of the Monsanto Chemical Works of Saint Louis, Manufacturers of Saccharin, Is Finally Decided in Its Favor.

The Supreme Court of the State of Missouri in handing down its *unanimous* decision that Saccharin is not deleterious to health, and declaring null and void the statute prohibiting its use recognized the principle that the amount used must be considered. This, the Supreme Court of the United States also did in its decision in the famous Bleached Flour case.

An excessive use of anything is harmful, whether it be sugar, salt or water.

SACCHARIN is much more desirable than sugar as a sweetening agent for soft drinks from any view point: (First)—Healthfulness; (Second)—Economy.

In using SACCHARIN the danger from the use of sugar is eliminated, and the infinitesimal amount of SACCHARIN that is required to sweeten cannot possibly be harmful to any one, either adults or children.

Any physician will tell you that we are all eating too much sugar. When it is considered that practically 20% of the people of the country are either afflicted with Kidney troubles or have a tendency to be so afflicted, and that sugar is a known poison to such people,—the majority being unconscious of the fact—it leaves no room for doubt that SACCHARIN is the proper and most desirable sweetening agent for soft drinks.

Use SACCHARIN to sweeten and do not hesitate to declare its use on the label. **Such declaration stamps your goods as being healthful.**

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Butter in Cold Storages.

Reports from 165 cold storages made to the Department of Markets, United States Department of Agriculture, show that their rooms contained 91,728,394 pounds of creamery butter on October 1, 1916, as compared with 104,964,478 pounds in 203 storages on September 1.

The 133 storages that reported holdings on October 1 of this year and last show a present stock of 88,909,646 pounds as compared with 99,449,607 pounds last year, a difference of 10,539,961 pounds or 10.6 per cent less.

The reports of 155 storages show that their holdings decreased 17.5 per cent during September as compared with the increase of 10.6 per cent during August, shown in our last report.

Last year the holdings increased 21.5 per cent during August and 1.7 per cent during September.

Eggs in Cold Storage.

Reports from 222 cold storages to the Department of Markets, United States Department of Agriculture, show that their rooms contained 4,358,073 cases of eggs on October 1, 1916, as compared with 4,935,312 cases in 271 storages on September 1.

The 183 storages that reported holdings on October 1 of this year and last show a present stock of 4,184,283 cases as compared with 5,019,022 cases last year, a decrease of 834,739 cases or 16.6 per cent.

The reports of 211 storages show that the holdings decreased 12.1 per cent during September as compared with the decrease of 10.9 per cent during August, shown in our last report.

Last year the holdings decreased 6.6 per cent during August and 11.6 per cent during September.

Cold Storage Holdings of American Cheese, October 1.

Reports from 168 cold storages show that their rooms contain 28,487,768 pounds of American cheese as compared with 36,413,561 pounds in 199 storages on September 1. The 126 storages that reported holdings on October first of this year and last show a present stock of 22,408,699 pounds as compared with 22,622,367 pounds last year, a difference of 213,668 pounds or nine-tenths of one per cent. The reports of 147 storages show that their holdings increased 1.5 per cent during September as compared with the increase of 1.3 per cent during September last year. As a few cold storages have not responded to monthly inquiries, this report does not include all holdings.

Molasses and Blackstrap in Demand.

The increased production of sugar in the West Indies and Louisiana has caused a shortage in grocery molasses, and consequently high prices. Black strap is largely produced in both Cuba and Porto Rico, and the demand for the same has increased extensively, largely due to its use for molasses feed and distilling. The prices have more than doubled since the beginning of the European war. It is largely used for distilling. Some houses use as much as 100,000 barrels a year. Farmers buy it in large lots and store it in the barns and make their own molasses feed.

There has been a radical change in the freight rates on grocery molasses imported from the Island of Barbadoes. Formerly a puncheon of molasses could be brought from the West Indies to Portland, Maine, as low as \$2.50, while on this last crop the rate has been as high as \$8. Halifax used to pay \$2 to \$2.50 per puncheon; \$7 and \$7.50 have been paid this year, due to scarcity of vessels.

Blackstrap is brought in tank vessels from Porto Rico and Cuba, with a capacity of 800,000 gallons, and transferred either in Brooklyn or Boston to tanks of equal size and then shipped in tank cars to the west.

In New England blended molasses has been growing in

favor. The introduction of canned molasses has become popular in some sections although the cost to the consumer is double that bought in bulk by the retailer and in jugs or kegs by the consumer.

Canadian Wheat Crop Only Half.

The wheat crop of Canada for the present year will be only 159,123,000 bushels, as compared with 376,303,600 bushels in 1915, according to an official estimate issued October 15.

The average yield per acre was estimated at 15 $\frac{7}{8}$ bushels from a harvested area of 10,085,300 acres, as compared with 29 bushels from a harvested area of 12,986,400 acres in 1915.

A marked decrease in the production of oats also was indicated by the estimated yield of 338,469,000 bushels from 9,795,000 acres, a yield per acre of 34.55 bushels, as against 45.76 bushels last year, when the production was 520,103,000 bushels from a harvested area of 11,365,000.

The barley crop was estimated at 32,299,000 bushels from 1,328,800 acres, or 24.31 bushels per acre. Last year's crop was 53,331,300 and the acreage 1,509,350.

The probable production of rye was announced as 2,058,500 bushels from 101,420 acres, or an average yield per acre of 20.30 bushels, as against a total production in 1915 of 2,394,100 bushels from an acreage of 112,300.

California Citrus Fruit Crop Big.

Indications for a bumper citrus fruit crop in California this season are unusually good, according to the crop report recently issued by Geo. P. Weldon, acting State Horticultural Commissioner, who has received returns from every producing county in the state. Grape fruit, oranges and lemons are practically a 100 per cent crop in every county in the state. Los Angeles, the largest producing county, has 90 per cent crops for lemons and oranges, 80 per cent crop of olives and a full crop of grapefruit. Riverside orange growers predict only an 80 per cent crop. Orange County has a normal crop. Shasta, Yolo and Yuba counties alone have suffered damage to their olive crops. In Yolo and Yuba the crop will be but 60 per cent of normal, while in Shasta the olives have been damaged until the crop will not be more than 10 per cent. All three counties, however, raise a very small percentage of the olive crop. Butte County, one of the largest olive producing counties, will produce but a 40 per cent crop this year. Olives suffered more or less in all counties in the state except Fresno, Imperial, Madera, San Diego and Santa Barbara, where the crops will be 100 per cent.

Canning California Sweet Potatoes.

Sweet potato canning began early in October and is now on in full force at the Libby, McNeill & Libby cannery, at Selma, Cal., and a large crew of workers will be engaged with yam canning until nearly holiday time. The industry is being considerably expanded this season, due to orders in excess of last season's entire output. Pumpkins will also be canned in large quantities.

Lake and River Fisheries.

Waukegan fishermen are hailing with delight the opportunity offered by the State of Illinois to fish during the closed season next month. They say the present season has been one of the poorest in their recollection and they see a chance to do a little unlooked for business. The fishing during the month of November never has been permitted, as it is the closed season, the month when the lake trout do their spawning. Fishermen say fish always seem to be more plentiful during the closed season, but they never have been able to take advantage of the condition. The state wants 1,000,000 lake trout eggs. The eggs are rather large, running about 6,000 to the quart. This would show that the number of fish necessary to make a million would have to be considerable. The state gives the fishermen all the trout caught in

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return for the eggs turned over. This is considered ample remuneration. The local fishermen say there is still another side of the situation. They say that they depend for their livelihood on the fish they catch. During the last few years the number of trout caught has resulted in the numbers being depleted considerably. It is felt that the 1,000,000 fry which will be deposited in the lake at Waukegan next spring will have the effect of restoring the lake at this point and greatly increasing the fishing in the course of the next two or three years.

Harvesting and Storing Sweet Potatoes.

Sweet potatoes must be harvested and stored with the utmost care, say specialists of the U. S. Department of Agriculture, if their production is to prove profitable. Any bruising of the roots, either in the field or in storage, will greatly increase the percentage of loss. In storage, the temperature at which the potatoes are kept is also an important factor in determining their keeping qualities.

Throughout most of the sweet potato producing region the harvest will take place within the next six weeks or two months. Growers should be sure before digging that the roots are mature, and they should select a time when the ground is dry and the day bright. If frost nips the plants, the roots should be dug within the next few days, and if this is impossible, the dead plants should be cut off at the ground with a hoe so that in rotting they will not carry the decay to the roots.

Care should be taken in plowing out the potatoes to avoid all bruising by contact between the implements used and the roots. The soil should then be scratched away from the potatoes and they should be left exposed for several hours to dry. Picking should be in padded boxes, baskets, or crates. The roots should be carefully placed, not thrown, into the picking receptacles. Although sweet potatoes do not have the appearance of being easily injured, they require, in fact, as careful handling as oranges and apples.

Handling should be minimized to as great an extent as possible. This makes desirable a rough sorting in the field by placing the largest potatoes in one picking container, the smallest in another, and the bruised roots in a third. In no case should sacks be used either as temporary containers or for marketing purposes. Diseased potatoes should be placed in none of the assortments. Such roots should not be left permanently in the field, however, to contaminate the soil, but should be gathered and fed to pigs.

Proper storage facilities are valuable to the grower in that they do away with the necessity of selling the crop on digging, greatly lessen the heavy losses sustained when the primitive storage methods of burying the potatoes is employed, and permit holding for good prices in winter or spring. A special storage house, such as many southern farmers have built, is advocated by the Department specialists. Such a structure with a capacity of 1,000 to 2,500 bushels can be built at a cost of from \$100 to \$500, depending on the availability of lumber and other material. The storage house should have double walls to insulate against heat and cold, and a false floor to facilitate ventilation. A stove should be installed for supplying artificial heat. If bins are used, they should have slatted sides, further to facilitate a circulation of air.

Sweet potatoes may be satisfactorily stored in bins, but where economically practicable it is advisable to store in crates or hampers, since such a practice reduces pressure on the roots, permits better ventilation, and confines such rotting as may start to a relatively restricted space. In some sections the potatoes are stored in the hampers in which they are to be marketed, being removed just before shipment and resorted.

Where storage is to be in bins or other receptacles these should, if they have been used before, be thoroughly disinfected by spraying with solutions of formalin or copper sulphate. The former should be used in the proportion of 1 pint to 30 gallons of water. The copper sulphate should be used at the rate of 1 pound to 25 gallons of water. With either solution a second spraying should be given after 24 hours.

When first placed in the storage house, sweet potatoes should be cured by being kept, by the use of a fire, in a temperature of from 80 to 90 degrees Fahrenheit. This curing temperature should be maintained for from ten days to two weeks, and should then be gradually reduced to about 55 degrees, and kept at as near this point as possible. After this, the ventilators should be left open during the day in clear, warm weather, and kept closed during the nights and in damp or rainy weather. When the temperature in the house goes below 50 degrees Fahrenheit, the house should be opened if the outside temperature is higher, or a fire should be started to raise the temperature to the desired point, since once the potatoes have become thoroughly chilled their quality is impaired and they are more susceptible to decay. In order to maintain the proper temperatures, farmers should install accurate thermometers in their storage houses.

Further information on this subject may be obtained from Farmers' Bulletin No. 548.

Changes in Rice Growing and Rice Milling.

In a review of the industry of rice cleaning and polishing in this country which has been published by the United States Bureau of the Census various changes in recent years in the rice-growing districts and in the locations of the mills are pointed out. The statistics on which the report is based were published in *Commerce Reports* for March 8, 1916. The completed publication, which relates to conditions in 1914, contains much material derived from the history of the industry. It states:

The rice plant requires much moisture, and it is necessary to resort to irrigation in supplying it. Formerly the entire production of rice in the United States was grown in the low-lying coastal lands adjacent to rivers, from which they were flooded. The nature of the land and the character of the irrigation works made rice growing in these localities both difficult and expensive. With the development of irrigation in the United States, however, it has been found expedient to use the level and somewhat elevated sections of Louisiana, Texas, and Arkansas for this culture. These sections, being easily drained, are well adapted to rice growing, and the plowing, harrowing, sowing, and reaping can be done in the same manner as for other grain crops. As a result, it is probable that the production of rice has undergone greater changes than that of any other crop grown in the United States.

As late as 1890, or 25 years ago, nearly all the American rice was grown near the Atlantic and Gulf coasts. The culture in these localities, however, has been practically discontinued, and nearly the entire production of the country is now grown in the inland sections of Louisiana and Texas, and in Arkansas, in the order named.

The change in the habitat of rice in the United States has necessarily brought about a change in the location of the rice mills. Whereas most of the cleaning and polishing establishments were formerly in the Carolinas and Georgia, the industry in these states has almost disappeared and now nearly all the mills are located in Louisiana, Texas and Arkansas, with a few small ones in the Pacific coast cities.

Formerly the rough rice was generally milled on contract for a stipulated price or for a portion of the rice itself. With the erection of the larger and more up-to-date mills in the new rice-growing districts, however, has come the general practice of buying the rough rice outright, milling it, and selling the various products obtained. The industry has accordingly changed almost entirely from a custom-milling to a merchant-milling basis. As a result of the erection of these larger mills there has been a gradual reduction in the number of establishments engaged in cleaning rice. This tendency was especially pronounced from 1909 to 1914.

Spanish Olive Crop Short.

Growers estimate the harvest of olives this year at 35 to 40 per cent of last year's crop. Gathering had begun when the latest advices were forwarded, but most of the fruit was still on the trees.

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According to Department of Agriculture Bulletin No. 118: Apply 0.62 pounds Borax to every 10 cubic feet of manure. Apply Borax particularly around edges; sprinkle with 2 or 3 gallons of water. This treatment should be repeated with each addition of fresh manure. Flies lay their eggs in fresh manure. Borax prevents their hatching.

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WHAT WE BOUGHT FOR A BILLION DOLLARS.

The United States bought more than a billion dollars' worth of merchandise from its tropical neighbors last year. South and Central America, the West Indian Islands, Mexico, the Islands of the Pacific, the southern frontage of Asia and the northern section of Africa were the principal sources of supply of over a billion dollars' worth of tropical and sub-tropical products entering continental United States in the fiscal year 1916. A compilation by the Foreign Trade Department of the National City Bank shows that we brought into our ports in the fiscal year just ended more than \$300,000,000 worth of sugar, \$160,000,000 worth of rubber, \$125,000,000 worth of raw silk, \$115,000,000 worth of coffee, \$60,000,000 worth of fibers, over \$40,000,000 worth of fruits and nuts, \$40,000,000 worth of cotton, \$35,000,000 worth of cacao, while the remainder of the billion dollars' worth of merchandise from the tropics included tea, vegetable oils, gums, rice, cork, spices, cabinet woods, ostrich feathers, vanilla beans, dyestuffs, barks for quinine, tanning materials, indigo, ivory and ivory nuts, licorice root, sago, tapioca and sponges.

A very large proportion of this increase is due to the activity of the manufacturing industries of the country, in part also to the heavy demands upon us from Europe for material of this class, a part to higher prices and a portion to a disposition on the part of our neighbors to make the United States a point for the distribution of their products. With the opening of the Panama Canal and the disarrangement of steamship lines upon the Atlantic and Mediterranean, much merchandise formerly sent direct to Europe is now passing by way of the United States, part of it for transshipment in the form in which received, other portions to be transformed into condition ready for use before being passed along to the consumers of other parts of the world.

Sugar shows the largest total in value and also the largest increase over earlier years. The total value of sugar brought into continental United States from foreign countries, and our own islands amounted to \$309,000,000, against \$257,000,000 in 1915 and \$197,000,000 in 1912, the highest record prior to the war. Coffee amounted to 116 million dollars in value, against \$108,000,000 in 1915. Cacao also made a new record, \$35,000,000, against \$23,000,000 in 1915, the former high record year. Tea exceeded \$20,000,000, against \$18,000,000, in 1915, a larger total in value than in any year since 1881, while the quantity, 110 million pounds, was larger than in any earlier year except 1909, 1904 and 1897.

This total of over one billion dollars' worth of tropical and sub-tropical products brought into continental United States in the fiscal year 1916 exceeds that of any earlier year, the official figures for preceding years having been in 1915 \$805,646,000; 1913, \$761,943,000; 1910, \$636,920,000, and 1900, \$334,591,000.

Potato Bread and Rolls.

Excellent bread can be made by using three pounds of boiled and mashed potato and two and one-quarter pounds of good bread flour, according to the baking specialists of the U. S. Department of Agriculture. The bread so compounded has a rich brown crust and tender and elastic crumb. It has an appetizing odor and a very agreeable taste, which is preferred by many to that of bread made wholly from flour. When made according to the directions with care, potato bread contains more mineral matter, fiber, and moisture, but otherwise, in composition and nutritive value, is practically the same as ordinary bread. Its higher moisture content helps to keep it fresh several days longer than ordinary bread. In localities where there is a surplus of potatoes or where they are very cheap, potato bread costs less to make than all-flour bread. This would prove an excellent way in which to utilize cull potatoes. Even, however, where the relative market prices of potatoes and flour are such that there is no economy in substituting potato for flour, the individual flavor and keeping quality of potato bread make it desirable as a variant in the family diet.

Potato bread as known abroad is made generally with potato flour, about ten parts of this commonly being used

with ninety parts of wheat flour or a mixture of rye and wheat flours. As potato flour and dried potato flakes are not accessible to the American housewife, the specialists conducted a series of successful experiments in using boiled potatoes with flour.

More Olive Oil.

If there is one piece of safe advice to cooks, it is, says a writer in *The Epicure*, to use olive oil more liberally.

Use olive oil in some recipes in place of butter. It is particularly delicious in gingerbread, and baked beans.

It is economical in frying because any olive oil left in the pan can be filtered through cheesecloth and kept in a cool place for future use. It can be used over and over again.

Olive oil should be hot before the article to be fried is placed in the pan. Its temperature can be raised to over 600 degrees before it burns, whereas butter burns at a little over 200, suet at about 300 and lard at 325.

Olive oil, with the high degree of heat, quickly coats the outside of the article with a crust which prevents the oil from penetrating. Butter, on account of the low temperature at which it must be kept so that it will not scorch, is really a poor frying medium.

When chickens or other birds are roasted, grilled or boiled, they should be basted with olive oil.

When preserving fruit, rub the kettle with olive oil, to prevent the fruit from burning.

The Useful Lemon.

Be very grateful when "handed a lemon," for it has many uses in the sickroom, the kitchen, 'round the house and in milady's chamber.

The juice from half a lemon in half of glass of water before breakfast will correct the most torpid liver and prevent bilious troubles.

For hoarseness, lemon and sugar will prove helpful and pleasant to take and will cure sore throat when used as a gargle.

In fever the lemon is cooling and of great value for moistening the lips and cleansing the tongue.

Two or three slices of lemon in a cup of strong, hot tea often will cure a nervous headache and refresh the mind and body.

A spoonful of lemon juice in a cup of black coffee frequently will cure bilious headache.

An outward application of lemon will allay irritation caused by insect bites.

If a teaspoonful of lemon juice is added to boiling rice or sago, the kernels will be whiter and have a more delicate flavor.

California Raisin Crop Seriously Hurt By Rain.

Notice was sent by the California Associated Raisin Company to the trade throughout the country on October 6, that owing to the shortened raisin crop resulting from rain storms it would be forced to fill all orders on file before the rains on a seventy-five per cent pro rata basis. This short crop contingency is provided for by a clause in the company's contract making this permissible.

A survey of the situation by officials of the company resulted in the conclusion that between forty and forty-five per cent of the raisin crop would be unfit for the trade. Of the balance, it is said that between ten and fifteen per cent will be first grade stock, having already been cured when the rains commenced. The remainder is about evenly divided between a dead loss and a chance for salvage through sale to wineries.

Candy Day a Great Success.

Secretary W. C. Hughes, of the National Confectioners' Association, says that reports received from confectioners in all sections of the country, east, west, north, and south, indicate that the first observance of Candy Day, October 14, has been a great big success and of inestimable benefit to the industry, the results of the occasion forecasting the increasing popularity and daily consumption of candy in the next twelve months. It is proposed to make Candy Day an annual event.

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What is more exhausting than headache? Yet—a headache is "*only a symptom.*" It is in the conditions back of headaches—the conditions by which headaches are caused—that the real danger lies. High blood pressure, auto-intoxication, eye-strain and worse disorders cause headaches. To be rid of headaches, you must get at their cause. How to do this is explained in a new book, "Headaches and How to Prevent Them"—by Dr. W. H. Riley, a Neurologist who has had years of experience in treating all kinds of cases involving headaches. You may get relief by following the teachings of Dr. Riley's book. No drugs. Only natural means—diet, rest, and sleep. We send this book for your **FREE** examination. All you do is ask for it. (See the coupon.) If not satisfied with the book, return it at our expense. Your examination costs you not a penny.

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WHAT IS A DRUG?

Possibly no word in the English language is at the present time more loosely used than is the word drug. It is defined as "A substance used as a medicine." Presumably the same substance if not used for a medicinal purpose is not longer a drug. Thus cloves, official as *caryophyllus* in many pharmacopœias, is a drug when used for medicinal purposes. When used for culinary purposes it becomes a spice. The English "drug" is said to be derived from the French "drogue," but the etymological meaning of both terms is not given. A drug is something that has been dried and the word is applied primarily to dried parts of plants, thus the dried flowering tops of *Mentha piperita* are the drug peppermint, the dried inner bark of *Cinnamomum zeylanicum* constitutes the drug Ceylon cinnamon. The use of the original word was so extended as to include exudations of plants. Thus the so-called gumi benzoës has long been regarded as a drug. But benzoic acid, derived from gum benzoës or, now from toluene, has not until recently been looked upon as a drug and then only by writers who desired to be sensational rather than correct. Thus food preparations flavored with cinnamon, cloves, alspice and other drugs, are said to be free from drugs, but those that contain benzoic acid, a definite chemical compound prepared from toluene, are claimed to contain drugs.—*Midland Druggist and Pharmaceutical Review*.

For a Clean and Safe Milk Supply.

Resolution adopted by the International Association of Dairy and Milk Inspectors, October 19, 1916, Springfield, Mass.:

Whereas, The dairy cow is the greatest conservator of the fertility of the soil, without which there is no permanent agriculture; and,

Whereas, Milk is the greatest of all articles of food, as well as the most economical, and should be at all times available to every consumer; and,

Whereas, It is of the utmost importance to public health that this article of food be clean and safe; and,

Whereas, Recent investigations have shown that the factors for the production of clean and safe milk are few and simple; and,

Whereas, Investigations have shown that the rules and regulations, laws and ordinances governing the production, care, distribution and sale of milk and milk products are so numerous and so lacking in uniformity, so many and so complex and conflicting as to cause confusion, discourage production, and seriously to interfere with the development of the dairy industry of the country to the extent of limiting the supply of this important article of food. Therefore, be it

Resolved, That this association appoint a committee of three or five to draft rules and regulations based upon the minimum requirements as shown by recent investigations which will secure for the consumers a clean and safe milk supply, and this committee be empowered to meet and confer with like committees of any other association interested in this subject.

The Low Cost of Health.

We hear much of the high cost of living, but we overlook the fact that many of the best things of life can be had for nothing.

It costs nothing to stand up and walk and breathe properly. Fresh air in the home is free.

No expense to taking a few simple exercises every morning.

It costs nothing to chew the food thoroughly.

It costs nothing to select the food best suited to the body.

It costs nothing to clean the teeth twice a day.

It costs no more to stop using patent medicines.

It costs no more to read good books than trashy literature.

It costs nothing to have a cheerful, happy disposition, and stop having grouches.

These things cost nothing, yet they will bring content and reduce the doctor bill to nothing a year.—For You, Ford Motor Co.

Wholesale Druggists' National Convention.

The forty-second annual convention of the National Wholesale Druggists' Association was held in Baltimore, during the week beginning October 2. The meeting was pronounced a most successful one, the attendance was large, and the results were satisfactory. Chicago was selected for the next place of meeting.

The new president is James W. Morrison, of Chicago, and Harvey H. Robinson, chairman of the local committee which arranged the details of the convention, was chosen first vice-president.

Other officers elected were William Scott, of Indianapolis, Ind., second vice-president; F. A. Solomons, Savannah, Ga., third vice-president; S. D. Andrews, Minneapolis, Minn., fourth vice-president; and Nelson V. Snow, Syracuse, N. Y., fifth vice-president. The new board of control is composed of Charles E. Bedwell, Omaha, Neb., chairman; George P. Merrell, St. Louis, Mo.; A. D. Parker, New Orleans; F. C. Groover, Jacksonville, Fla., and L. D. Sale, Los Angeles, Cal.

The Board of Control, after being installed, re-elected F. E. Holliday, of New York, secretary, and Evans E. A. Stone, of New York, assistant secretary, of the association. The Title Guarantee and Trust Company, of New York, was appointed treasurer.

National Association of Ice Cream Manufacturers.

At the convention of the National Association of Ice Cream Manufacturers, held in Atlantic City, N. J., October 10-13, inclusive, the following were chosen directors of the organization:

Robert Crane, Philadelphia, Pa.; Wm. E. Telling, Cleveland, Ohio; E. E. Rieck, Pittsburgh, Pa.; S. A. Carver, Los Angeles, Cal.; H. M. Hardwick, Boston, Mass.; Asa B. Gardiner, Jr., Baltimore, Md.; A. A. Chapin, Washington, D. C.; L. W. Wilson, Fresno, Cal.; W. M. B. Sine, Parkersburg, W. Va.; George Thompson, Chicago, Ill.; Claude E. Davis, Cambridge, Mass.; Joseph T. Castles, Irvington, N. J.; G. W. Weatherly, Portland, Ore.; W. F. Henningson, Butte, Mont., and S. T. Nivling, Rochester, N. Y.

The board of directors then chose the following officers:

President, Asa B. Gardiner, Baltimore, Md.; vice president, Robert Crane, Philadelphia, Pa.; treasurer, W. J. Weller, Brooklyn, N. J.

Many practical and valuable addresses were made at the several sessions, and the large attendance proved the interest of the members.

Sweet Potato Cannery in Convention.

The Southern Sweet Potato Cannery Association held its annual meeting in New Orleans on September 29. Frank E. Gorrell, secretary of the National Association, made the principal address of the meeting. While some of the southern potato packers, individually, are members of the National Cannery Association, the Association has not yet affiliated. However, a potato section will be formed and come into the National Association in January.

Officers elected for the coming year were: Ralph D. Quisenberry, of Montgomery, president; E. E. Conner, of Hattiesburg, re-elected secretary treasurer; M. C. Bridges, vice president for Louisiana; P. H. Roberts, vice president for Mississippi; J. S. Ogburn, vice president for Texas; H. H. Shower, vice president for Tennessee; Burt Johnson, vice president for Arkansas; and King Pharr, vice president for Alabama.

According to newspaper reports a French genius has invented a machine which cuts and butters 3,600 slices of bread in an hour. The loaves of bread and the butter are fed into separate hoppers and come out as neat and daintily spread sandwiches. They are said to be used at the different "feeding stations" in France where the marching troops, as well as the hungry populace, are fed.

Grazing experts of the Forest Service estimate that the cost of producing lambs in the northwestern states is \$1.82 per head.



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TO THE JOBBER AND RETAILER



The St. James Importing Company, of New York and London, the well-known distributors of Waw Waw Sauce, has been bought by men of strong financial backing who bring to the Company not only ample resources but also the full benefits of many years' experience with one of the largest and most successful manufacturers of food products in the country.

Plans are already laid to place Waw Waw in its deserved position as the King of Table Sauces.

We cannot make Waw Waw Sauce itself any better but we can and will make Waw Waw Sauce a better seller.

An extensive advertising campaign in the leading Journals is now in course of preparation. No pains, expense or effort will be spared to make Waw Waw a leader in easy, steady selling, just as it is now a leader in quality.

Full details of the new plans will be mailed to jobbers and retailers throughout the country. In the meantime the already increasing inflows of orders are being filled promptly from our New York warehouse.

SPECIAL—If you are not fully acquainted with the unusual merit of Waw Waw Sauce, write at once and a full size sample bottle will be sent for trial on your own table.

St. James Importing Company NEW YORK

CHOCOLATE AND COCOA.

Cocoa and chocolate are made from the beans of the small tree, *Theobroma cacao*. In brief, the method of manufacture is as follows: After swcating and the removal of such impurities as stones, parts of the shell, etc., the beans are roasted, thus developing the flavor and making easier the subsequent removal of the shells and the grinding. The beans are then crushed by machinery, the shells being thus removed. The broken beans, known as "cocoa nibs," are then ground, the heat developed by the grinding melting the fat, and the paste thus obtained is run into moulds, where it is cooled, and makes what is known in the trade as unsweetened, plain or premium chocolate. Sweet chocolate is prepared by mixing pulverized sugar and vanilla, or other flavoring material, with the chocolate paste. In milk chocolate a certain amount of milk is introduced, either as milk itself, or condensed milk, or milk powder, from which more or less of the milk fat may have been removed.

Cocoa is prepared from chocolate by removing by pressure a portion of the fat and reducing the residue to a fine powder, with or without the addition of flavor. While chocolate contains about fifty per cent. of fat, cocoa, as a rule, contains only about one-half of that amount.

There has been some question raised as to the proper nomenclature of chocolate and cocoa. While it is true that the original product containing all the cocoa fat, strictly speaking, should be called "cocoa," or more properly "cacao," the name under which it is known in the countries where it is produced, long commercial practice has established otherwise, and manufacturers, dealers and consumers for almost a century have understood "chocolate" to be the product containing all the original cocoa fat, and "cocoa" to be the product from which a portion of the fat has been removed. To change the significance of these two names at the present time would serve no useful purpose and would cause needless confusion.

The most complete analyses of authentic chocolate and cocoa are those of Winton (Conn. Expt. Stat. Report, 1902, 282). The following are Winton's average figures in the original material:

	Cocoa nibs	Chocolate	Cocoa
Ash	3.32	3.15	5.49
Insoluble ash	1.16	1.41	2.82
Sand	0.02	0.06	0.24
Nitrogen	2.38	2.26	3.33
Theobromin	1.04	0.78	1.15
Caffein	0.40	0.13	0.16
Fat	50.12	52.19	26.69
Fiber	2.64	2.86	4.48
Starch	8.07	8.11	11.14

The removal of a portion of the cocoa butter to make the product known as "cocoa," of course, is not an adulteration. The chief adulterations observed in these products have been incomplete removal of the shells and the addition of shells, starch, flour or sugar. In former times Venetian red, coal-tar dyes and other artificial colors were sometimes found. These are no longer met with in commercial chocolate and cocoa, although not infrequently iron oxide or some other iron compound is used to intensify the color in the coatings of cheap confectionery and in soda-water syrups.

Honey in the Trenches in Europe.

Honey is being used in the European trenches along with sugar. Both of these articles are energy-producers, and in many cases honey is cheaper than sugar. When the war broke out in 1914 the prices on medium grades of honey began to sag until there was no demand. In the meantime sugar began to climb. The war lords of Europe, when it came to the matter of rations, soon discovered that honey, an energy-producer, was much cheaper than sugar (also an energy-producer), and consequently honey has been going into the trenches, and is going there still. Apparently only the medium grades are being used, because they furnish as much energy per pound as the finer and better-flavored table honeys that cost as much or more than sugar.

MAPLE-SUGAR INDUSTRY IN CANADA.

Canada as a whole produces annually, according to recent statistics, about \$2,000,000 worth of maple products. Of the total yield during the five years 1908-1912 the United States took 99 percent of the sugar and 50 percent of the sirup. In that period the aggregate export was 8,685,000 pounds of sugar and 20,000 gallons of sirup, with the Province of Quebec the chief producer.

In the maritime provinces the value of the maple tree, save as a factor in the lumbering industry, has hardly yet begun to be appreciated and the making of maple sugar and sirup has never been undertaken in a systematic manner. Nevertheless there are a few farmers who find the unfelled maple a source of profit. One of these has furnished, at the writer's request, the following facts with regard to the maple areas and the making of maple sugar and sirup in the Nova Scotian county of Cumberland:

The Cobequid Mountains, from near Parrsboro to Londonderry and Westchester, extend for about 40 miles, with an average width of hardwood lands of perhaps 15 miles. Of this hardwood it is safe to say that one-third is maple. There are probably not more than 100 sugarhouses in this whole area of 600 square miles. Practically all of these are equipped with modern evaporators. An outfit of buckets, tanks, evaporator, and buildings will cost from \$400 to \$600 for a woods of 1,200 to 2,000 trees (a fair average in this county). In normal seasons the yield is about 1¼ pounds per tree, or 1,500 pounds for 1,200 trees. At the same ratio 100 farms would produce 150,000 pounds of sugar.

The Nova Scotian maple sap is made into hard sugar, cream sugar, wax, and sirup. Prices are about as follows for best-quality products, but current report forecasts marked advances shortly: Hard sugar, \$0.12 a pound; cream sugar, \$0.16 to \$0.18 a pound; candy or wax, \$0.15 to \$0.18 a pound; sirup, \$1.25 a gallon.

Compared with Quebec's sugar woods, those in Nova Scotia do not yield as much per tree, but whether this is due to the soil and the size of the trees has not yet been determined. The Nova Scotia farmer who follows the sugar industry does so at a season of the year when his other duties demand but little of his time. However, the work is attended with considerable hardship, as many of the woods are far away from the homestead. In such case the sugar maker must have, in addition to his sugarhouse, a camp for himself and a barn for his horses. It is the practice for him to remain in camp for the whole season, coming out only for supplies or to dispose of his sugar. Last spring the sugar makers had to break through three feet of solid snow to reach their camps at the beginning of the season.

Iowa Requires Net Weight Mark on Produce.

Edward C. Lytton, Iowa state inspector of weights and measures, has notified commission houses that neglect to comply with the department instructions to mark the net weight on bananas, potatoes, and other produce may lead to prosecutions.

Why Tea Cups Have Saucers.

The china tea cup came to the western world with tea, and like other exotics has had strange experiences in new lands. The Chinese used saucers to invert over their cups while the tea brewed within, subsequently decanting into a cup without a saucer from which they drank. The English declined, however, to submit to dictation, and placed the saucer firmly beneath the cup, considering that they heightened the ornamental effect. Still worse, they began to drink from the saucer, after brewing the tea in a common receptacle. Cups expanded in time and saucers contracted, the latter to less than three inches across. Later the operation was reversed and cups came down to an inch and a half whereas saucers went to five inches. The present dimensions, no matter how varied, are a kind of compromise, and we have reverted to Chinese notions about drinking from the saucer.



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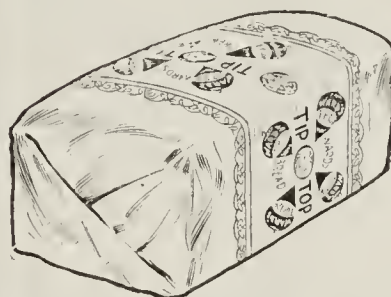
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FROGS AS FOOD.

Far from being unpopular, as some persons erroneously maintain, the demand in France for this quaint dish tends to become greater and greater every day. The green, or common frog is the kind most in request for culinary purposes, and unquestionably forms a very favorite and delicate dish, especially when prepared by first-class cooks. It may not be generally known that frogs are an excellent food, they are as nourishing as they are savory. They are further reputed to be light, agreeable to the palate, and suitable to the most delicate stomach. This is why they are given to invalids in France. Only the hind legs are eaten, and these are cooked in almost as many different ways as omelettes. They are usually made into a stew or fried in the pan by the working classes in Paris. Exquisite nourishing soups are also made in France from frogs.

The demand for frogs is greater with Provincials than it is with Parisians; the reason for this is attributed to the fact that Parisians are becoming more dainty. Frogs are next to unknown both in Normandy and Brittany; in the north of France, the quantities of frogs consumed, chiefly by the well-to-do classe, are enormous. Whereas, only the legs are eaten in France, in Italy and Germany—noted as frog-eating countries—the animal is consumed whole after being previously skinned and cleaned. In the south of France frogs are reared in special parks oyster-fashion.

As already observed, frogs in France are either fried like fish, or made into stew. In the first case, after being properly cleaned, they are left to soak for two or three hours in cold water, and then drained. They are afterwards placed in vinegar for another hour, when they are well powdered over with flour, placed in the frying pan, and seasoned to taste.

When desired to be eaten with white sauce or a la poulette the frogs, or rather their legs to be correct, are placed in a saucepan along with some butter, to which are added a little white wine, together with salt, pepper, parsley, bay leaves, onions and thyme. Stir well and serve hot. Frog soup is prepared by boiling the animals' legs in the ordinary way, adding vegetables of all sorts and seasoning to taste. In order to obtain a rich soup, many persons add a piece of bacon, or butter is a substitute. After simmering for five hours you will have obtained a very fair though almost tasteless soup. It is not the less nourishing for invalids.—*The Caterer*.

About Lobsters and Lobster Traps.

The lobster is an odd creature. Neither flesh, fowl, nor good red herring, he has properties in common with all three, together with characteristics peculiarly his own. The old Romans knew and appreciated him, and from their time down to the present, his marine majesty has reigned supreme, king of the sideboard and the salad bowl.

Lobster-traps are cylindrical in form, constructed of open slat-work. One end is funnel-shaped, with an opening large enough to admit the passage of the body of the lobster. They are baited with a piece of pork or fragments of fish, and anchored with a stone in from two to four fathoms of water.

Mr. Lobster scents the dainty from afar, and after a cautious survey of the premises, abutments, and appurtenances of the "creel," as it is sometimes styled, concludes to enter. Once inside, he apparently realizes that he is entrapped and, with philosophical calmness, sits down to await his doom.

Why he does not attempt to escape is an unsolved mystery. The hole, which served as an easy means of ingress is open, and would afford an equally unobstructed avenue of egress, but the prisoner never avails himself of it. He will not even touch the bait, which often attracts others of his kind. The sight of their incarcerated relative does not deter them from passing through the aperture and likewise waiting for the liberty which never comes.

In this position they will not fight with one another, although ordinarily the most pugnacious of the many quarrelsome denizens of the deep.

Curing California Raisins By Furnace Heat.

Rains in the drying season are seldom experienced in the raisin-producing district of California, but they came this year, during the first week of October, and great loss has resulted. Many vineyardists made attempts quickly to save the wet fruit, and drying sheds, heated by a furnace were constructed and put in operation. It is thought that a large percentage of the threatened loss can be averted in this way. Some of the early seedless varieties were out of the way before the storms came.

Pacific Livestock Show.

The Sixth Annual Pacific International Livestock Exposition will be held at Union Stock Yards, North Portland, Ore., December 4-9, 1916. The show this year will take rank with the largest livestock expositions in the United States. Between \$20,000 and \$25,000 will be given in cash premiums for livestock. The Shorthorn and Hereford Associations of America have made total appropriations of \$5,000, which being matched by the Exposition makes premiums of \$10,000 for those two breeds alone and insures the strongest kind of competition in this class. Close to \$5,000 is being offered in the dairy division; \$2,500 is being given in the sheep classes, while hogs are recognized to about the same extent. The draft type of horses are given over \$1,200. Cattle in carlots are recognized to the extent of \$2,500. The student judging contest, to be participated in by all of the agricultural colleges of the Northwest, again receives \$300.

International Live Stock Exposition.

Chicago Union Stock Yards, December 2 to 9, 1916, is the place and date of this year's International Live Stock Exposition. B. H. Heide, secretary, is very busy with the preliminary details now, but finds time to send out encouraging letters announcing the features of the show.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

of The American Food Journal, published monthly at Chicago, Ill., for October 1, 1916.

State of Illinois, County of Cook, ss.—Before me, a notary public in and for the state and county aforesaid, personally appeared Herman B. Meyers, who, having been duly sworn according to law, deposes and says that he is the Owner and Publisher of The American Food Journal, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor and business manager are:
 Publisher—Herman B. Meyers, 15 S. Market St.
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2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock):

The American Food Journal, Inc.
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3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages or other securities are: (If there are none, so state.)—There are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also, that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association or corporation has any interest direct or indirect in the said stock, bonds or other securities than as so stated by him.

HERMAN B. MEYERS.

Sworn to and subscribed before me this 26th day of September, 1916.

(Seal.)

H. L. SPENCER.

(My commission expires November, 1919.)

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In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

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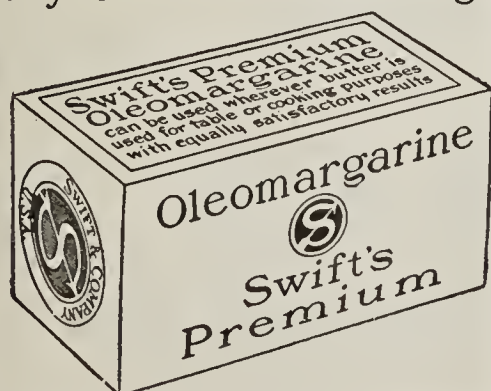
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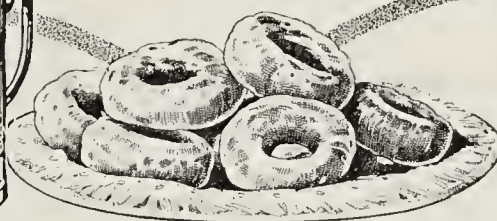
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Vol. XI

DECEMBER, 1916

No. 12

An Editorial Announcement.

From this time forth the readers of The American Food Journal will be given a slightly wider range of matter, all of which will be germane to the subject of food. The Journal has taken good care of the general news in the field which it serves. It has also printed in full practically every important legal decision interpretive of the Food and Drugs Act. Both of these features are to be maintained in the days to come and serious effort will be made each month to print all legislative and administrative rulings, together with an account of all activity by food control officials, with editorial comment thereon when such seems desirable. This magazine is based upon the assumption that food manufacturers as a class are anxious to comply with the law. While it is well to bear in mind that every flock has a few black sheep, it still is a fact that the great majority of food manufacturers are law-abiding citizens who are extremely anxious to keep out of the courts. Some instances of prosecution, no doubt, bring to light deliberate disregard of the law; but many reveal the fact that the food manufacturer has erred through a lack of definite information or, at times, misinformation, rather than intent. It is of interest to know that the present management is so placed as to be able to give in its editorial columns, or through personal correspondence, sound advice and counsel as to the legal aspects of food control.

The Technique of Food Manufacture.

In addition to the general news and legal phases of the food industry, future issues of The American Food Journal will have a great deal to say concerning the technique of food manufacture. Scientific accuracy in all forms of manufacturing has come, and come to stay. While manufacturers in general have but small choice in this matter, the food manufacturer has practically no choice at all. If he is to comply with the legislation now in force he must, of necessity, turn out a product which is uniform from day to day. This state of affairs, in itself, calls for scientific control in the factory. It is influenced not at all by competition, labor conditions or the price paid for raw materials, although those highly

important factors are a part of the force compelling the modern manufacturer to become scientific in the conduct of his business. The necessity of complying with the law presents to the food manufacturer the choice of either conducting his business on a scientific basis, or else of being haled into court every so often to answer for some actual, although innocent, transgression of the law. For this one reason, if for no other, it is believed that the contemplated series of articles on "Scientific Manufacture in the Food Industry" will be of substantial aid to the manufacturing side of the food industry.

There are certain fundamental principles of physics and chemistry which underlie the whole food industry, but, unfortunately, much that is common knowledge to some is often quite unknown to others engaged in the same industry. Presumably, many of these processes are of such nature that were they known generally, certain of them would be adopted wherever they were appropriate and would be the means of bringing about economy in operation as well as improvement of the product.

Those of us who are seriously interested in securing the best possible food at the lowest possible cost can undoubtedly learn from each other. Especially is this the case in such an industry as that of the commercial manufacture of food, with its comparatively short existence and rapid recent development in all directions.

This series of articles is designed to be a resumé of all recent advancement in the science of food manufacture, published in the hope that it will be of constructive help to our readers. There will be nothing academic about the series; it will be limited to the practical, commercial features of applied science.

In this issue of The American Food Journal appears an article on the manufacture of salt as it is now practiced by the leading American salt refiners. Following the December article will appear others of similar nature upon such topics as the milling of wheat, the manufacture of butter and margarine, the refining of sugar, the commercial manufacture of bread, the making of yeast and vinegar, the canning of meats and vegetables, milk products, the hydrogenation of oils, the manufacture of products from corn, meat products, beverages, spices and condiments, vegetable oils—in short, every division and sub-division of the food industry. As at present planned, the series will run for at least two years.

The Science of Food Manufacture.

Accompanying each of the foregoing technical articles will be authoritative contributions discussing in simple terms the chemical reaction upon which each particular industry is based. For instance, in the case of the hydrogenation of oils the accompanying article will, for obvious reasons, be on *catalysis*: in the case of corn products, *hydrolysis*; as a goodly part of corn starch is hydrolized to sugar: in the cases of bread and yeast, on the appropriate subject of *fermentation*.

Laboratory Control in the Factory.

Arrangements are being made also for a series of articles, one each month, under the heading "Laboratory Equipment." These articles will be contributed by men who actually know the *materiél* necessary for the proper equipment of a work's laboratory and the articles will be written from the point of view of how little, rather than how much, of such equipment is really necessary. This series of articles will undoubtedly be of real service to the manufacturer who realizes that he needs a laboratory but doesn't know quite how to go about the matter of installing one.

Sanitation.

The subject of sanitation and personal hygiene in the production and sale of food products will be given a great deal of attention. An ever-increasing amount of stress is being laid upon this important point by the Federal departments as well as by those of the several States. It is a question which should be discussed from all angles. It is of importance to the consumer and of even greater importance to the food manufacturer.

Helen Louise Johnson.

The past few years have seen a constantly growing interest upon the part of well informed women in the subject of commercial foods. Practically every girls' school now has a department of Domestic Science and Household Economy, and many of the more important organizations of women have standing committees whose duty it is to take an active part in supervising the marketing of food products. It is a pleasure to be able to announce that arrangements have been made for a series of articles to run regularly during the coming year over the signature of Miss Helen Louise Johnson. This lady has been intimately associated with sane food legislation and control for the past twenty years. She has for some time past been Chairman of the Home Economics Committee of the General Federation of Women's Clubs. Her articles will be of interest to the food manufacturer from the particularly valuable point of view of giving him an intelligent insight into what is expected of him in the way of a finished product. Incidentally, Miss Johnson will make use of the columns of this Journal to inform her fellow club women, a large number of whom are regular subscribers to The American Food Journal, as to the food manufacturer's point of view. Miss Johnson is by no means a stranger to our readers, a report of her recent address at the Detroit Convention of food officials having been printed no longer ago than our September issue.

Political Activity.

The various feature articles—"Scientific Manufacture in the Food Industry," "Sanitation," Miss Helen Louise Johnson's contributions and the others mentioned—will constitute but a part, and a relatively small part, of each issue. Matters of interest to food manufacturers, such, for instance, as legislative protection from unfair competition or the removal of unnecessary hampering legislation, as they arise from time to time will be treated editorially as needs must be in a paper of this sort.

Standardization.

The all-important matter of governmental standardization of food products will be up for action during the next few years. It is hardly necessary to state that the food industry should have some one publication of a general nature which may render articulate its position in this matter. The many excellent trade papers in the food field can do much toward securing justice for their constituents and with them this Journal will at all times endeavor to work in close co-operation. But there are certain limitations to the effective effort of a periodical devoted to any one branch of the food industry. Such limitations do not affect a journal devoted to the food trade field as a whole and such is The American Food Journal. Both at Washington and in the various state capitols The American Food Journal has for many years been regarded as an honest, disinterested and able representative of the food manufacturers as a whole. Every effort will be made to maintain this record unimpaired.

Salt.

To those of us who share the biologists' opinion that man was originally a marine organism common salt is of more than passing interest. When it is born in mind that sea water contains 2.64 per cent of sodium chloride, it would be but natural to suppose that organisms which originally made their home in the prehistoric oceans would be well disposed toward that condiment which today is so important a part of our dietary. Nor does the case rest here. The doctors tell us that the human stomach contains a small but definite amount of hydrochloric acid and they further tell us that the rhythmic beating of the heart, day after day and year after year, depends upon its being constantly bathed in a solution containing the correct proportions of sodium and calcium. Truly, both from the point of view of a tender sentiment naturally felt for the familiar features of one's ancestral home and from that of its being our present raw material for two highly important bodily functions, *Na Cl* is entitled to any man's hearty respect. Elsewhere in this issue will be found much upon this subject. It is unfortunate that, perhaps because of its very commonness, salt is not treated with any great amount of thoroughness in the more easily accessible literature of the chemical industry.

Corn Syrup.

Elsewhere in this issue is a scientific opinion regarding the digestibility of corn syrup, scientifically known as commercial glucose, which is the result of a great deal of laborious and painstaking experimental work on the part of two scientists who have spent many years in carbohydrate research work. The report of their investigation is printed in full in the November

issue of "The Journal of Industrial and Engineering Chemistry," Vol. 8, No. 11, and it is through the courtesy of that publication that we are enabled to reprint the general statement summarizing the results obtained.

Mixed Flour.

One of the first things the third session of the Sixty-fourth Congress should, and undoubtedly will do, is to pass the Rainey bill. This is a bill which has as its object the removal of the archaic tax and Internal Revenue Department control of the manufacture of bread-making flours part wheat and part some other cereal. At the adjournment of the second session of the Sixty-fourth Congress, this bill had been considered by the Committee on Ways and Means and had been "passed without prejudice," a parliamentary term indicating that the bill may be brought up at any time that the committee so desires. In view of the present existence of the Federal Food and Drugs Act, which is abundantly able satisfactorily to control the manufacture and sale of every sort of wholesome compound—which mixed flour certainly is—and in view of the more than fair phraseology of Mr. Rainey's bill, it is hard for the average mortal to understand why this bill should be fought so bitterly by the wheat millers. They claim to fear "unrestricted adulteration," "debasement of the national bread supply" and many other grievous contingencies. They protest so loudly and in so many different keys as to give rise to the suspicion that possibly what they really fear is the necessity of competing with cereals other than wheat.

That the millers of hard wheat flour have determined to go down with all flags flying, is indicated by the action of the directors of the Millers' National Federation at their semi-annual meeting in Chicago on October 27. The treasurer reported that during the last session of Congress the Federation had spent about \$7,500 in their effort to stave off the repeal of the mixed flour law. That is about one-third of the Federation's total expenditure for the year. With an eye toward possible further opposition to Mr. Rainey's bill, the Federation has "passed the hat" among its members.

By the way, anyone interested in the dietetic argumentation emanating from the hard wheat camp would do well to read the contribution of Mr. R. Harcourt, entitled "The composition of bread from different kinds of flour," printed in the British Food Journal, 18, pps. 339-40 (1916). Great Britain is at the present moment weighing the various arguments of the producers of foodstuffs in an extremely critical fashion. One of Mr. Harcourt's conclusions is that "when eaten as part of a mixed diet bread made of soft wheat flour is practically equal to that obtained from hard spring wheat." Mixed flour is, to all intents and purposes, a synthetic, soft winter wheat, fancy patent flour.

Another Leading Case.

The Federal decision in the Curtice Brothers Company case, printed in full in this issue, is of unusual interest. Just as the McDermott case clarified the situation in regard to alleged *misbranding*, this case, in substantially the same fashion, disposes of the question of alleged *adulteration*. The two cases together go to show that state legislation must yield to Federal legislation whenever the state statutes con-

tradict any of the terms of the Federal statutes. In short, the Federal statutes protect goods shipped in interstate commerce from the point of manufacture to that of ultimate consumption, *provided such consumption takes place from the original container*. By the reasoning employed, Curtice Brothers Company would apparently have lost the suit had their goods after having entered Wisconsin, been transferred from the original container into other containers. This is an interesting point inasmuch as it practically means that vinegar, for example, shipped into Wisconsin in barrels and sold at retail in small quantities, is subject to the Wisconsin regulations concerning vinegar, whereas the same vinegar, shipped into the state in bottles suitable for use on the dining table is subject to the Federal regulations concerning vinegar.

The case was thoroughly argued, the state officials citing, among others, the well known case of *Armour vs. North Dakota*, in which the question at issue was the unit of measurement in dispensing lard. The judge held that although the North Dakota statute differs from the Federal statute it was supplementary legislation and not contradictory legislation, and hence good law. The Minnesota rate case, which was also mentioned and in which the state of Minnesota was criticized for maintaining a commission which practically duplicated the work of the Federal Interstate Commerce Commission, was also declared to be good law, because of its supplementary nature and not contradictory nature. The Iowa statutes in regard to the sale of whisky were argued but declared to be not pertinent because of the fact that the United States has never expressed itself as to whether or not whisky is good for one, hence the states are at liberty to take such action as they see fit in that connection.

"Getting Allyn."

The November issue of McClure's magazine contains an article entitled "Getting Allyn," the "sub-head" being "A Record of Truth." The article bears the signature of one George Kibbe Turner. It is unfortunate that Mr. Turner saw fit to cast his narrative in what newspaper men term "small-town stuff," otherwise known as artificial *naïveté*. The reader finishes it with a sense of having been in the presence of a work of art rather than a bald statement of fact. An air of artificiality is particularly inappropriate for apologetic writing.

As the man in the restaurant said about his hard-boiled egg, "Parts of this egg are really very good," so can it truthfully be said that parts of Mr. Turner's article are really very good. For instance, when referring to the "Westfield standard" he says: "It was a ridiculous thing when you thought of it—this little town setting its judgment up against the Remsen Board and the United States Government." Quite so; it *was* ridiculous in the extreme; Mr. Turner is well justified in giving that statement in his Record of Truth.

Other parts of Mr. Turner's article are not so good. He seems to have an infinite scorn for any one who would, forsooth, manufacture food "Good enough for the United States," and seems to take it for granted that all will agree with him in his inference that foods declared wholesome and legal by the governmental authorities are not fit to eat unless given a clean bill of health by this adviser to the advertising department

of a magazine, the very existence of which depends upon its revenue from advertisements printed and paid for. Could any type of reasoning be more amateurish? It's *naïveté* sure enough—the man's artful in his very artlessness.

But, as in all works of art, the last is the best. In his closing paragraph Mr. Turner states: “* * * all the time, while this Westfield standard has kept always the same, the Federal Government laws keep changing and coming near to it—to the Pure Food Regulations that this man set up in this small town.” The obvious intent is, of course, to persuade the reader that Allyn was the cause of events which, as a matter of fact, he watched from afar—from his small town in the Berkshire Hills. All who are conversant with the genesis of the Food and Drugs Act, know that those responsible for its passage were, in 1906 and preceding years, fully posted as to preservatives, artificial coloring and similar moot points. Congress intentionally refrained from particularizing as to what should be allowed and what should not be allowed in these matters, the answering of such questions being considered a proper function of the administrative side of the law. The Referee Board, composed of distinguished scientists and not of small men from small towns, has passed upon several of the points under discussion. The regularly constituted food control officials of this country need no assistance such as “the Pure Food Regulations that this man set up in this small town.”

After one has finished Mr. Turner's article it is of interest to turn to that most estimable periodical, “The Survey,” issue of August 19th, and read the following level-headed editorial:

Pure Judgments on Pure Foods.

There has recently been published the report of the American Chemical Society concerning pure food campaigns in general and especially that of Westfield, Mass., conducted by Lewis B. Allyn.

The report is of much more than academic interest. Mr. Allyn, chemist of the Westfield Agricultural Station, has written for some time in popular magazines condemning certain foods and toilet articles and endorsing others. He was criticized for unprofessional conduct on this account by a section of the American Chemical Society which appointed a committee to report on the situation.

Pure food is a vital subject in this decade and information, pro and con, has a decided news value. The investigating committee recognized this fact and considered such campaigns as that at Westfield as originating and receiving impetus from “*the fact that the public desires a positive guarantee of the purity of foods and toilet preparations.*” This interest is recognized by public officials, but the attempt to meet it is especially by exposing fraudulent preparations rather than by recommending articles of excellence.

The committee believes that “*special movements exploited by magazines and other publications in connection with their advertising columns must be considered altogether wrong in principle and opposed to the best interests of the public.*” The reasons for this stand the committee offers as, first, the connection of advertising with such a campaign. The movements can hardly be disinterested when pressure is exerted by advertising departments. A

bias is thus created in the editorial department affecting the policy of the publication, and leads, consciously or unconsciously, to gain rather than to public interest.

Another reason offered is that campaigns of such type have neither the “*large means nor high scientific standing now to secure a really efficient and reliable guarantee to the public . . . they are likely to be supported by wholly inadequate chemical and bacteriological staffs, and by altogether insufficient forces of inspectors.*”

And the third reason is that the campaigns as a rule “*depend upon the dictum of some single self-constituted ‘authority,’ possibly having little or no scientific training, often a narrow training and experience.*”

In view of the large demand of the public for positive information in these matters and of the defects of such movements as these just criticized, the committee urged that “*governing bodies formulate some plan leading to certification of food and toilet articles by the national government and by properly organized and equipped departments of the states and larger municipalities or some other form of public control.*”

The report closes with recognition of the “*integrity, disinterested and competent character of the work done in the past and at present by men engaged in the government food control.*”

The committee after consideration of these facts recommended that no action be taken by the American Chemical Society leading to the expulsion of Mr. Allyn.

The report is signed by Prof. Julius Stieglitz, head of the department of chemistry in the University of Chicago; L. P. Brown, Bureau of Food Inspection, New York; A. D. Thorburn of the Pickman-Moore Company, Indianapolis; E. C. H. Bailey, professor of chemistry, University of Kansas and L. W. Jones, professor of chemistry, University of Cincinnati.

Allyn is generic: he is not a new phenomenon. On page 606 of this issue will be found a letter written in 1880 reciting the need for a national pure food law containing the following:

“The main object of legislation upon this subject should be to prevent deception, to furnish to the public authoritative information, and to nullify the operations of ignorant and sensational alarmists, who damage the business interests of the country quite as much as do the evils of which they complain.”

Even in 1880 there were self-constituted food authorities who were attracting attention and since that day there have been many besides Allyn—some of them honest, some of them not so honest. But it is not necessary to prove dishonesty in such cases. The mere fact that self-anointed prophets are self-anointed is enough. Food control work is not without its perplexing problems when conducted by the orderly processes of existing law. If to that law is to be added the personal whims of volunteer authorities the situation would soon become hopelessly chaotic. As the Romans used to say of Carthage, “Allyn must go!”

Proposed Sanitary Law

This has been adopted in substance, and to a large part, in form by the Association of American Dairy, Food and Drug officials. It has been officially endorsed by the National Wholesale Grocers' Association. The Home Economics Department of the General Federation of Women's Clubs is sending a copy to their various State organizations to the end that the consumer may co-operate in urging its enactment. It is understood that State Boards of Health and Food Departments are planning to introduce similar bills into their respective legislatures.

AN ACT

Providing for clean, sanitary, and healthful food establishments, and for other purposes.

Section 1. **UNCLEAN, UNSANITARY, AND UNHEALTHFUL ESTABLISHMENTS AND CONDITIONS PROHIBITED.**—That it shall be unlawful for any person to manufacture, prepare, pack, can, bottle, keep, store, handle, serve, or distribute, in any manner, food, for the purpose of sale, in an unclean, unsanitary, or unhealthful establishment, or under unclean, unsanitary or unhealthful conditions, and except pursuant, in all ways, to the provisions of this Act.

Section 2. **CLEAN, SANITARY AND HEALTHFUL ESTABLISHMENTS AND CONDITIONS REQUIRED.**—That every establishment, subject to the provisions of this Act, shall be constructed, maintained and operated with strict regard for the health of the employees and for the purity and wholesomeness of the food therein produced, kept, stored, handled, served, or distributed, so far as may be reasonable and necessary in the public interest and consistent with the character of the establishment, pursuant to the following general requirements, viz.:

(a) The entire establishment and its immediate appertaining premises, including the fixtures and furnishings, the machinery, apparatus, implements, utensils, receptacles, vehicles, and other devices used in the production, keeping, storing, handling, serving, or distributing of the food, or of the materials used in the food, shall be constructed, maintained and operated in a clean, sanitary and healthful manner.

(b) The food, and the materials used in the food, shall be protected from any foreign and injurious contamination which may render them unfit for human consumption.

(c) The clothing, habits, and conduct of the employees shall be conducive to and promote cleanliness, sanitation and healthfulness.

(d) There shall be proper, suitable and adequate light, ventilation, drainage and plumbing.

(e) There shall be proper, suitable and adequate toilets and lavatories, constructed, maintained and operated in a clean, sanitary and healthful manner.

Section 3. **EMPLOYEES MUST BE FREE FROM CONTAGIOUS AND INFECTIOUS DISEASE.**—That it shall be unlawful for any employer to require, permit or suffer any person affected with any contagious, infectious or other disease or physical ailment which may render such employment detrimental to the public interest, to work, and it shall be unlawful for any person, so affected, to work, in any establishment subject to the provisions of this Act—pursuant to the provisions of Section 4.

Section 4. **PHYSICAL EXAMINATION OF EMPLOYEES.**—That, in order to effect the provisions of Section 3, the State (Board of Health) may require any person proposing to work, or working, in an establishment subject to the provisions of this Act, to undergo a physical examination, for the purpose of ascertaining whether such person is affected with any contagious, infectious or other disease or physical ailment, which may render the employment detrimental to the public interest. The examination shall be made at the time and pursuant to the conditions duly defined by the State (Board of Health). No person who refuses to submit to such examination shall work or be required, permitted, or suffered to work in any such establishment.

Section 5. **ENFORCEMENT.**—That the State (Board of Health) shall be charged with the duty of enforcing the provisions of this Act.

Section 6. **INSPECTIONS.**—That the State (Board of Health), through its duly authorized officers, inspectors, agents, or other assistants, shall be permitted, at all reasonable times, to inspect any establishment, or part thereof, subject to the provisions of this Act, together with its operation. Any person refusing or interfering with such inspection shall, upon conviction, be punished as provided in Section 11.

Section 7. **PRELIMINARY NOTICE, ORDER, HEARING.**—That if, as a result of an inspection provided for in Section 6, it shall appear that any establishment is being maintained or operated in violation of any of the provisions of this Act, the State (Board of Health) shall cause written notice thereof to be served upon the person violating said provisions, together with an order commanding an abatement of such violation and a compliance with this Act within a reasonable period of time stated in the order. Any person upon whom such notice and order is served shall be given an opportunity to be heard and to show cause why such order should be vacated or amended, under such rules and regulations as may be duly prescribed. If, as a result of such hearing, it shall appear that the provisions of this Act have not been violated, then the State (Board of Health) shall immediately vacate said order, without prejudice. If, however, after such hearing, it shall appear that the said provisions have been in any manner violated, and, upon a failure to comply with said order, in its original or amended form, within the reasonable time therein stated, then the State (Board of Health) shall, at once, certify the facts to the proper prosecuting attorney.

Section 8. **PROSECUTIONS.**—That it shall be the duty of each prosecuting attorney to whom the State (Board of Health) shall report a violation of any of the provisions of this Act to cause appropriate proceedings to be commenced and prosecuted in the proper courts, without delay, for the enforcement of the penalties herein provided.

Section 9. **REGULATIONS.**—That the State (Board of Health) shall make uniform and necessary rules and regulations for carrying out the provisions of this Act.

Section 10. **DEFINITIONS.**—That the term "food," as used in this Act, shall include all articles used for food, drink, confectionery, or condiment by man or other animals, whether simple, mixed, or compound, and all substances and ingredients used in the preparation thereof. The term "establishment," as used herein, shall include all buildings, rooms, basements, cellars, lofts or other premises, or part thereof, used, occupied, or maintained for the purpose of manufacturing, preparing, packing, canning, bottling, keeping, storing, handling, serving, or distributing, in any manner, food, for sale. The term "person," as used herein, shall include a partnership, association, company, or corporation as well as a natural person.

Section 11. **PENALTY.**—That any person who shall violate any of the provisions of this Act shall be guilty of a misdemeanor, and, upon conviction, for the first offense, shall be punished by a fine of not exceeding _____ dollars, and, upon conviction, for the second and each subsequent offense, shall be punished by a fine of not exceeding _____ dollars.

Section 12. **DATE OF EFFECT.**—This Act shall go into full force and effect on and after _____.

Section 13. **REPEAL.**—That all Acts and parts of Acts in conflict with this Act are hereby repealed.

The American Food Journal

R. G. GOULD, President.

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The ownership of The American Food Journal is vested solely in the officers of the company. No person, firm or corporation, either directly or indirectly connected with the business it represents, has any share in its ownership or voice in shaping its policy which has in view at all times the best interests of the field it serves. It aims to discuss all subjects fairly, and to furnish its readers information concerning the progress and development of the food industries. It will answer any questions concerning the business to the best of its ability, and it asks its readers in all parts of the world to aid it with inquiries and suggestions, to which it will give prompt and earnest consideration.

A Big Deal in the West.

The Carnation Milk Products Co. of Seattle, Wash., has purchased the Mount Vernon (Wash.) milk plant for a reported consideration of \$1,000,000.

Shredded Wheat Company Hearing.

The twice postponed Hearing in connection with the Federal Trade Commission's charge that the Shredded Wheat Company has been guilty of unfair methods of competition will be held in Pittsburgh on December 5. It is difficult to believe that the genial gentlemen who keep open house in their palace by Niagara can be guilty of the many incivilities alleged in the bill of complaint.

Decision in the Mary Jane Case.

The Supreme Court of the State of Kansas recently handed down a decision on the appealed suit having to do with the labeling of Mary Jane Syrup, manufactured by the Corn Products Refining Company. In the trial court the Corn Products Refining Company won, so that this decision has the effect of reversing the original decision.

From our staff correspondent's comment it would seem that the Supreme Court has in effect held that the Kansas authorities can compel a food manufacturer to give on the label particulars as to where the food product was manufactured and, provided it is a compound, to so state. Apparently nothing was said in this decision as to the question of quantitative labeling, one of the points involved and one which is, of course, much more important than the other two points.

Trouble in St. Louis.

Because of alleged speculation on the part of some of the jobbers in St. Louis, Missouri, several of the leading manufacturers have felt obliged to take drastic action even to the point of temporarily withdrawing from the St. Louis market. Believing that certain jobbers were not making full deliveries on orders from retailers, but were instead dealing in futures and selling a portion of their stock to speculators in order to make quick profits, the following companies insisted that jobbers discontinue such speculative action and make full deliveries on all orders from retailers:

The T. A. Snider Preserve Co., the Joseph Campbell Co., Corn Products Refining Co., Fort Scott Sorghum Syrup Co.,

Pacific Coast Condensed Milk Co., John Wildi Evaporated Milk Co., Wilson Milk Co. and Peet Brothers.

Departmental Publications Privileged.

It was recently held by the attorney general of Texas that all official communications required or permitted by a public officer are of a privileged character under the libel laws of that State. Commissioner D. H. Hoffman was anxious to incorporate in his annual report to the governor the result of his investigations of the foods and drugs being sold in Texas and asked the attorney general for a formal opinion as to how explicit he could safely make the report. From the opinion given it would seem to follow that all reports and bulletins issued by the Food and Drug Department of Texas are immune to libel suits. As reports of that nature usually contain analyses of various foods and drugs, together with opinions as to whether or not the products so analyzed are injurious to the human system, the opinion of the attorney general which undoubtedly would permit the inclusion of manufacturers' names is of more than passing interest.

Corn Products Refining Company Ordered Dissolved.

In conformity with his opinion of some weeks ago, Judge Learned Hand in the U. S. District Court on Nov. 13 filed a decree in the dissolution suit of the Corn Products Refining Company.

The decree finds that the several corporations and individuals against whom the suit was directed violated the Federal statutes concerning combinations in restraint of trade, and directs them to file with the Federal Trade Commission, within four months, a plan of dissolution. If the case is taken by appeal to the U. S. Supreme Court the four months period commences to run after the filing of the mandate of that court. The Federal Trade Commission will act in the capacity of Master in Chancery, hearing all parties and reporting to the Court a plan which will effectually dissolve the alleged trust and restore conditions in keeping with the law. Should the defendants fail to present such a plan within the specified time, the District Court intimated that receivership proceedings would be instigated looking toward dissolution.

November Crop Report.

The reports received by the Bureau of Crop Estimates of the U. S. Department of Agriculture, show that the month of October has not improved the former poor crop outlook. The late crops have now mostly matured and are largely harvested. The great staple, corn, which last month promised a crop slightly under the five-year average, it is estimated, has fallen off 75,000,000 bushels. The potato crop, known last month to be short, is yielding 12,000,000 bushels less than was then expected, being only about four-fifths of an average crop. The dry land sorghum grains (kafir, milo, feterita, etc.), which have so often in dry years matured satisfactory crops when ordinary corn failed, were unable this year to successfully withstand the extreme and exceptional heat and droughts, and have yielded a grain crop but little over half as large as the big crop of last year. Buckwheat, thought two months ago to promise an average crop and still indicating last month a fair outturn, now shows the result of little more than two-thirds of a crop. The production of beans is the lowest for several years, even less than the small crop of last year. Sweet potatoes are yielding about as anticipated, being a good crop. Flaxseed has about fulfilled expectations, with a crop larger than last year but below the average. Apples and pears confirm their earlier promise, the former slightly above and the latter slightly below the average. The apple production is considerably below that of last year. The crop of sugar beets is larger than last year and the sugar content higher than usual, though not quite so high as last year. Sugar cane in Louisiana and Texas is an exceptionally fine crop, one of the best of record, and will give a heavy yield. These sugar crops, however, furnish at best only a minor part of the country's supply. The tobacco crop is the largest of record, and of a superior quality.

The Federal Food and Drugs Act

An Address Delivered at Pittsburg, Pennsylvania, During the Eighth Annual Meeting of the American Specialty Manufacturers' Association by Charles Wesley Dunn, Esq., Counsel.

TEN years ago, on June 30th, 1906, the Federal Food and Drugs Act became the law of the land. A more beneficent law Congress has never enacted, or one that has conferred more genuine and lasting blessings upon the people of this great nation.

The American Specialty Manufacturers' Association has invited you to participate in a brief commemoration of this anniversary. We are prompted to recall this historical event because we believe, unqualifiedly and unreservedly, in the Federal Pure Food Law and all that it means, both to the consuming public and to the food industry. And is it not, indeed, significant that it has remained for the representative food manufacturers of the country to commemorate this occasion? Is it not an earnest of our sincerity and loyalty? Please remember, always, that while this law was the resultant of an irresistible public movement, participated in by very nearly every form of organized opinion, yet, among the principal and influential factors in that movement, were the honest American producers and tradesmen, who realized more fully than almost any one else what such a law really meant to the future welfare of the food industry and the general public.

In 1879, twenty-seven years before the Federal Pure Food Law was passed, we find what was, probably, the first definite movement leading toward the enactment of this law. In that year the National Board of Trade, representing the nation's business interests, adopted the following resolutions:

"Whereas, The public mind has of late been considerably agitated by the alleged general adulteration of food; and

"Whereas, The question of pure and wholesome food and drink is one of great importance to the people of the United States; and

"Whereas, Local attempts to regulate the sale of food have, on account of limited jurisdiction or other causes, generally proved inadequate for the purposes for which they were designed, and it is, therefore, important that wise laws (if possible, national in character) should be enacted which will afford adequate protection both to consumers and honest manufacturers; and

"Whereas, A member of this Board offers to place \$1,000 at the disposal of the Executive Council of this Board for a prize or prizes to be given for the best act or acts, accompanied by an essay designed to prevent injurious adulteration and regulate the sale of food without imposing unnecessary burdens upon commerce; therefore be it

"Resolved, That the President of the National Board of Trade be authorized to appoint a committee of experts, to be composed of five members, one of whom shall be a member of the medical profession, one a chemist, one a member of the legal profession, and one a merchant; said committee to examine and pass upon the merits of any acts or essays which may be submitted to them and to award prizes therefor. The committee as soon as possible after their appointment to make public the necessary conditions, and when their labors are completed to place in the hands of the President of this Board an act designed to accomplish the purpose above described."

The member of the Board offering this prize was Mr. F. B. Thurber, of New York City. Pursuant to this resolution the President of the National Board of Trade appointed the following committee of experts, viz.: John S. Billings, surgeon, United States Army, vice-president Na-

tional Board of Health, Washington, D. C.; Prof. Charles F. Chandler, president of the Board of Health, New York; ex-Chancellor B. Williamson, Elizabeth, N. J.; A. H. Hardy, Esq., of Boston, and John A. Gano, Esq., of Cincinnati. These distinguished gentlemen served without compensation. After several months' consideration, including extensive analyses by the chemists connected with the National Board of Health, a very interesting report was rendered by the committee, a copy of which follows:

New York, October 27, 1880.

Frederick Fraley, Esq., President,
National Board of Trade.

Sir: The committee appointed by the National Board of Trade for the purpose of awarding prizes for the best act, or acts, accompanied by an essay, designed to prevent injurious adulteration, and to regulate the sale of food without imposing unnecessary burdens upon commerce, have the honor to report as follows:

In accordance with the resolutions under which the committee was constituted, we have carefully examined the papers submitted in this competition, and from these have selected as the three most meritorious essays with the accompanying acts, numbering them consecutively in the order of merit as follows:

No. 1.—The essay and acts having the motto "Aequo Animo."

No. 2.—The essay and acts having the motto "Sic Utere tuo ut alienum non laedas."

No. 3.—The essays and acts having the motto "Overcome Evil with Good."

Upon opening the sealed envelopes having corresponding mottoes, it is found that the authors of these essays are as follows, viz.:

No. 1.—Motto "Aequo Animo," G. W. Wigner, F. C. S., London.

No. 2.—Motto "Sic utere tuo ut alienum non laedas." Vernon M. Davis, College of City of New York.

No. 3.—Motto "Overcome Evil with Good." William H. Newell, M. D., Jersey City Heights, N. J.

In addition to these essays, we recommend the printing of the essay the motto "Cardinal Cajetan," whose author is O. W. Wight, M. D., Health Officer, Milwaukee, Wis., and the remarks submitted under the motto "Work and Wait," by Albert B. Prescott, Ann Arbor, Mich.

In connection with this award, the following remarks are respectfully submitted:

1. In view of the statements which for the past two or three years have from time to time been made with regard to the prevalence in this country of adulterations of food, which are dangerous to health and life, and which have created so much agitation in the public mind, as to induce the National Board of Trade to establish this competition, it is gratifying to find that none of the essayists produce any definite or satisfactory evidence as to the widespread existence of such dangerous adulterations in this country. The absence of such evidence, in addition to the result recently obtained by several expert chemists in an extensive series of analyses of the usual articles of food in this country, which results have been made known to the committee, fully warrants us in declaring that none of our staple articles of food or drink are so

commonly adulterated as to be dangerous to health or life. Such dangerous adulterations appear to be mainly in the form of poisonous colors or coloring matters, as, for instance, in confectionery, and even these are rare.

2. The question of the adulteration of food, with perhaps the exception of milk, should therefore be considered, not so much from a sanitary standpoint as from that of commercial interests, as being of the nature of a fraud in aiding the sale of articles which are not as they are represented to be. The main object of legislation upon this subject should be to prevent deception, to furnish to the public authoritative information, and to nullify the operations of ignorant and sensational alarmists, who damage the business interests of the country quite as much as do the evils of which they complain.

3. We are of the opinion that there is much more danger to health and life in this country from adulterated drugs than there is from adulterated food, and that any legislation that is to deal with the one should also deal with the other.

4. To indicate the legislation upon the adulteration of food and drugs, which will protect health and prevent fraud, and at the same time not impose unnecessary burdens upon trade, is a matter of very great difficulty, as the result of this competition clearly shows, for we do not consider any of the acts proposed to be satisfactory. In this matter it is much better at first to do too little than too much, and the first steps in such legislation should be tentative and educational in character.

5. While it is highly desirable that the general principles of legislation on this subject should be the same in all States, we do not think it possible to secure by State laws absolute uniformity in the details in all parts of this country, and it would therefore be unwise to make the attempt.

6. We do not think that any law upon the adulteration of food and drugs can be made efficient without a properly constituted health authority to supervise its execution. The questions involved are in a high degree technical, and require special training in those charged with administering the law. At the same time we think that the existence of such health authorities should be taken for granted in the acts, and that these should not attempt to create them. We believe that every State should have a Board of Health, but that such boards should be created by independent legislation.

7. We think it inadvisable that the law should attempt to define in detail as to what an adulteration is. A very considerable amount of discretion should be left to the Board of Health in this respect, limiting it only in the direction of possible overrigidity. Many well recognized articles of commerce, although harmless and even useful, may be said to be adulterated, and it should be left to the discretion of the Board to exempt any article from the penalties imposed in the act.

8. Care should be taken not to make the penalties excessive. It should be remembered that mere exposure of fraudulent practices, if effectually and persistently made, is in itself a penalty, and as a rule public opinion may be trusted to make such practices unprofitable if measures be taken to make this opinion a correct one, which we think should be the great object of the law proposed. Under no circumstances should fees or moieties to informers be allowed.

9. We think that both State and national laws upon this subject are desirable. The State law should deal with the subject in the individual State. The national law should deal with the adulterated articles coming from foreign countries, or passing from one State into another, and also with adulterations in the territories, the District of Columbia, and all places under the special jurisdiction of the United States. It is, of course, in the highest degree desirable that the State and United States legislation on

this subject should not be discordant. The educational feature should be even more prominent in the national than in the State law, while the punitive feature should, if anything, be less severe. As the State laws will vary somewhat in this last respect, it follows that the penalties in the United States law should be at a minimum.

10. The committee will endeavor to prepare and to place in the hands of the President of the National Board of Trade, as soon as possible, drafts of acts, prepared in accordance with the general principles contained in this report.

All of which is respectfully submitted.

(Signed) JOHN S. BILLINGS,
B. WILLIAMSON,
C. F. CHANDLER,
A. H. HARDY,
Committee of Award.

In addition the committee drafted and proposed a bill incorporating a Federal Pure Food and Drugs Law for consideration by Congress. A copy of this bill follows:

A BILL

TO PREVENT THE ADULTERATION OF FOOD OR DRUGS.

Be it enacted, etc.: That no person or corporation shall knowingly transport, or cause to be transported, from the State, District or Territory, or from any foreign country, or other State or Territory, into the State or Territory in which he resides or does business, for sale or barter, or to be offered for sale or barter, any article of food or drugs adulterated within the meaning of this act, and any person violating the above provision shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not more than fifty dollars for each offense.

Section 2. That no person shall, within the District of Columbia or in any of the territories, or in any fort, arsenal, dock-yard, or reservation, or other place under the jurisdiction of the United States, manufacture, offer for sale, or sell any article of food or drugs which is adulterated within the meaning of this act, and any person violating this provision shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding fifty dollars.

Sec. 3. If, on examination of any article of food or drugs imported from any foreign country, it is found to be adulterated within the meaning of this act, a return to that effect shall be made upon the invoice and articles so noted shall not be permitted to pass the custom house or be delivered to the consignees, unless on re-examination, as provided for in this act, it shall be found that said articles are not adulterated.

Sec. 4. The owner or consignee shall have the privilege of calling at his own expense for a re-examination, and on depositing with the Collector of Customs such sum as he may deem sufficient to defray such expense it shall be the duty of the Collector of Customs to procure a certificate, under oath from a public analyst, of a careful analysis of the articles in question; and in case the report by certificate of the analyst shall declare the report of the officer who examined the goods to be erroneous and the said articles to be unadulterated, the said articles shall be returned to the owner or consignee and passed without reservation on payment of the duties, if any. But in case the officer's return shall be sustained by the analyst, the said articles shall remain in charge of the Collector of Customs, to be disposed of in accordance with regulations to be prepared by the National Board of Health and approved by the Secretary of the Treasury; Provided, that the owner or consignee, on payment of charges of storage and other expenses necessarily incurred by the United States, and on giving bond, with sureties satisfactory to the Collector, agreeing to remove said articles from the United States, shall have the privilege of re-exporting

them at any time within the period of six months after the date of the report of the inspector or public analyst.

Sec. 5. In order to carry into effect the provisions of this act, the Secretary of the Treasury is hereby authorized to appoint from names submitted to him for that purpose by the National Board of Health one or more suitably qualified persons as special inspectors and as public analysts for adulterated food and drugs at such ports of entry as the Secretary of the Treasury may deem expedient, and it shall be the duty of the National Board of Health to prepare instructions governing the work of such inspectors and analysts, which, when approved by the Secretary of the Treasury, shall govern their action and that of Collectors of Customs, in preventing importation from foreign countries of food or drugs adulterated within the meaning of this act.

Sec. 6. The National Board of Health shall make or cause to be made examination of specimens of food and drugs collected under its direction in various parts of the country, and shall publish in its weekly bulletin the results of such analyses. If it shall appear from such examination that any of the provisions of this act have been violated, the Secretary of the Board shall at once report the facts to the proper United States District Attorney, with a copy of the results of the analyses duly authenticated by the analyst under oath.

Sec. 7. It shall be the duty of every District Attorney to whom the Secretary of the National Board of Health or any Collector of Customs shall report any violation of this act to cause proper proceedings to be commenced and prosecuted without delay for the fines and penalties in such case provided, unless upon inquiry and examination, he shall decide that such proceedings cannot probably be sustained, in which case he shall report the facts to the National Board of Health. And for the expenses incurred and services rendered in all such cases the District Attorney shall receive and be paid from the treasury such sums as the Secretary of the Treasury shall deem just and reasonable, upon the certificate of the judge before whom such cases are tried or disposed.

Sec. 8. An article shall be deemed to be adulterated within the meaning of this act—

A—In the case of drugs.

1. If, when sold under or by a name recognized in the United States Pharmacopoeia, it differs from the standard of strength, quality or purity laid down therein.

2. If, when sold under or by a name not recognized in the United States Pharmacopoeia, but which is found in some other pharmacopoeia or other standard work of materia medica, it differs materially from the standard of strength, quality or purity laid down in such work.

3. If its strength or purity fall below the professed standard under which it is sold.

B—In the case of food or drink.

1. If any substance or substances has or have been mixed with it so as to reduce or lower or injuriously affect its quality or strength.

2. If any inferior or cheaper substance or substances have been substituted wholly or in part for the article.

3. If any valuable constituent of the article has been wholly or in part abstracted.

4. If it be an imitation of or be sold under the name of another article.

5. If it consists wholly or in part of a diseased or decomposed, or putrid or rotten, animal or vegetable substance, whether manufactured or not, or in the case of milk, if it is the product of a diseased animal.

6. If it be colored or coated, or polished or powdered, whereby damage is concealed, or it is made to appear better than it really is, or of greater value.

7. If it contain any added poisonous ingredient, or any ingredient which may render such article injurious to the health of a person consuming it: Provided, that the National Board of Health may, with the approval of the Secretary of the Treasury, from time to time declare certain articles or preparations to be exempt from the provisions of this act; and provided further, that the provisions of this act shall not apply to mixtures or compounds recognized as ordinary articles of food, provided that the same are not injurious to health, and that the articles are distinctly labeled as a mixture, stating the compounds of the mixture.

Sec. 9. It shall be the duty of the National Board of Health to prepare and publish from time to time lists of the articles, mixtures or compounds declared to be exempt from the provisions of this act in accordance with the preceding section. The National Board of Health shall also from time to time fix the limits of variability permissible in any article or compound.

Sec. 10. The term "food" as used in this act shall include every article used for food or drink by man. The term "drug" as used in this act shall include all medicines for internal or external use.

Sec. 11. All the regulations and declarations of the National Board of Health, made under this act from time to time and promulgated, shall be printed in the Statutes-at-Large.

Sec. 12. This act shall take effect ninety days after it shall have become a law.

Here, then, in 1879, twenty-seven years before the birth of the present law, was a definite national law proposed, and by whom?—by an influential and public-spirited body of business men, representing the business interests of the country.

It was not until about ten years later, however, that Congress took under advisement the first of a long series of food and drug bills for consideration. After one bill or another had been favorably reported, passed by either the Senate or the House, the present law finally resulted.

It follows that legislation of this character was constantly before Congress and received serious attention for about eighteen years prior to the passage of the present law. Fourteen years prior thereto the Paddock Bill, introduced into the United States Senate on June 3, 1890, was passed by that body. In the period between 1890 and 1906, twenty-seven such bills were introduced into the Senate, and twenty-nine in the House. Senators Paddock, Hiscock, Wilson, Faulkner, Gallinger, Thurston, Allen, Hansborough, Proctor, Jones, Foster, Mason, Cullom, Depew, McCumber, Heyburn and Hopkins, were the sponsors in the Senate, and Representatives Conger, Turner, Holman, Smith, Meredith, Grout, Babcock, Glynn, Brosius, Hepburn, Kahn, Warner, Sherman, Mann, Corliss, Davidson, Lorimer and Rodenberg, were the sponsors in the House.

The bill that was finally enacted was Senate Bill 88, introduced on December 6, 1905, by Mr. Heyburn.

In 1898 there assembled in Washington a National Pure Food and Drug Congress, composed of three hundred representatives of national industrial, agricultural, scientific, medical, consumer and official organizations, and of the National and State Food and Drug Departments. This body urged the passage of a national food law, in a very influential manner, at this and subsequent meetings.

In the meanwhile several of the states had enacted excellent food laws, notably, Massachusetts, New York, New Jersey, Pennsylvania, Ohio, Michigan, Minnesota and Wisconsin.

Through the influence of the druggists, pharmacy and pure drug laws had been extensively enacted. Through the influence of the confectioners, pure candy laws had been enacted in nearly all of the States. Other miscellaneous statutes had been passed.

But a national law was necessary, not only because of its own special need and merits, but, in addition, by reason of the fact that under our dual form of government, Federal and State, so long as interstate commerce remained free from regulation, the state laws were of limited value. Not only were the state laws seriously vulnerable because of the lack of Federal legislation, but they were, also, quite divergent in character and effect. In order to build up a uniform food and drug law throughout the country it was necessary that there be a national law to serve as a model.

Furthermore, in 1906 the United States was backward among the great nations of the world in food and drug legislation. Practically every other great nation had enacted, and was enforcing, effective national laws of this character. But it is a matter of deep pride to realize today, ten years later, that no nation throughout the entire world possess a more effective food and drug law, or one that is more efficiently enforced than that of the United States. The food and drugs of the people of this country receive the most careful scrutiny and efficient regulation of any of the great nations. With true Yankee caution we were slow in starting, and with true Yankee progressiveness, once started there was no other course than to set the pace.

It is interesting to note that a minority existed in the House of Representatives persisting to the end in the opinion that such a national law was neither constitutional nor necessary, that the states were well able to provide all the protection required. On January 18, 1904, a minority report was filed by several members of the House Committee on Interstate and Foreign Commerce, accompanying the majority report favorably recommending House Bill 6295. The following is an extract therefrom:

"The founders of our Republic fully appreciating the blessings of good government and the evils of bad government, though not as well up as we on amassing profits and figuring discriminating tariffs, had no thought that the Federal Government could possibly embark in the business of regulating the menu or the table etiquette of the citizens of the States."

This objection does not meet the issue. The aim of the pure food law is to prohibit commerce in unwholesome and deleterious foods, and to eliminate fraud and misrepresentation in their sale. It is not the function of the food law to serve as a reference work for menus, as the steward in the selection of viands for the family board or a social secretary in regulating the etiquette of the dining-room. The food law is a police measure, a sign-post reading "Turn to the Right" and containing a drastic penalty for those who turn to the left and purvey articles which are common cheats or dangerous to human welfare.

The cry of the State-righters in Congress against Federal welfare legislation, such as food and drug, narcotic, child labor, etc., is becoming less and less influential. That cry is the echo from the past—not so long since, either, and within the memory of living man—when life, commerce, and regulation was, of necessity, principally local. State border lines were not only limits of jurisdiction, but, also, the horizon of all that was within. This condition of affairs soon changed, however, when science and invention ushered in the railroads, steamships, telephone, telegraph and the thousands of devices and agencies which obliterated distance and rendered intercommunication rapid and easy. With a population mounting beyond the hundred millions, with a commerce leaping to gigantic proportions, there evolved a national conduct, commerce, and thought. The new need demanded national legislation of the most intimate internal nature, such as pure food legislation, heretofore considered the special and exclusive province of the States. And such national legislation, once effected, became, and must become, the supreme law of the land, free from the slightest interference on the part of the individual states. State legislation must become uniform with and supplemental to, and be in no manner in conflict with the supreme national law. Just as food legislation was of State initiative

in the past, so now it will be of national initiative and development in the future. I refer, of course, only to such regulation as must needs go beyond the confines of the State. Purely local matters will always be properly the exclusive care of the States. It is only in matters of national interest that the States must join in the comity of States, so as to realize the "United States," the nation, from the "States united."

At this point it might be well to recall a fact, not generally known, that a Federal food and dairy law of limited effect was enacted four years before the passage of the present law. On July 1st, 1902, Congress enacted Chapter 1357 (32 Stat. 632), prohibiting interstate commerce in any dairy or food products falsely labeled or branded as to the State or Territory in which they were made, produced or grown. In addition there were a number of special food and drug and liquor laws.

The Federal Food and Drugs Act has been amended twice—first, to prohibit the fraudulent labeling of drugs as to their therapeutic claims, and, second, to require all packaged foods to be labeled to show the quantity of contents. Two additional amendments are needed; one to permit the Department of Agriculture to inspect and require the sanitation of food establishments sending their products in interstate commerce, the other to create a Federal Food Standards Commission authorized to establish food standards.

And now that we have a Federal Pure Food and Drug Law, what good has it accomplished? That is the question we all desire to hear answered. Time prevents an enumeration of the many far-reaching and inestimable benefits and accomplishments of this law. I shall only attempt to indicate some of the facts which are disclosed in the annual reports* of the Chief of the Bureau of Chemistry and of the Solicitor of the United States Department of Agriculture.

In 1915 the Bureau of Chemistry analyzed 4,412 official samples. The number of samples analyzed in 1915 was considerably less than in former years, because through co-operation between inspectors and laboratories, incident to the reorganization of the Bureau, the collection of samples had been systematized and duplication avoided to a greater extent than heretofore. While the number of samples collected in 1915 was less than in previous years, the percentage of violations, noted in the samples collected, was greater than in prior years.

The Department of Agriculture is not only prosecuting under the act, but is also obtaining convictions for conspiracies for which penalties may be imposed. In 1912 the first jail sentence was imposed, the defendant being sentenced to seven months' imprisonment on Blackwell's Island in New York City.

Down to the present time about 4,500 notices of judgment, under the act have been issued. That is to say, the courts have entered judgment in about 4,500 different cases.

The following table is illuminating:

CASES TRANSMITTED TO DEPARTMENT OF JUSTICE.									
	1916	1915	1914	1913	1912	1911	1910	1909	1908
Total	978	767	436	1,048	1,459	1,162	990	498	135
Criminal	401	276	87	652	991	825	766	...	97
Civil	577	491	349	396	467	337	224	...	38

It will be noted that the high tide of reported violations was reached in 1912, or six years after the enactment of the law. As would be expected, the reported violations increased in number during the first few years. Since 1912 the numerical tide has turned, and, in 1916, 978 cases were reported. Furthermore, it is very interesting to note that the criminal actions outnumbered the civil actions until 1914.

*The reports of the Chief of the Bureau of Chemistry and of the Solicitor, for 1916, were not at hand, in their entirety, when this was written.

Pursuing our investigation further.

CASES TERMINATED IN COURTS.				
	1916	1915	1914	1913
Total	1,036	958	776	1,250
Criminal	434	501	407	848
Civil	602	457	369	402

The difference between the number of cases reported and terminated during these years is due, primarily, to the fact that many cases are pending as unsettled at the close of each fiscal year. In 1913 the high tide of cases terminated was reached, following the high tide of cases reported in 1912. In 1912, 741 cases were prosecuted, and in 1911, 684.

Having noted the activity and vigilance of the government in the matter of prosecution, the next question, naturally, is: How successful has the Government been in its prosecutions?

By far the large majority of the cases prosecuted are uncontested and permitted to go by default. No doubt in the majority of these cases no defense could be successfully interposed. It is difficult, however, to ascertain the merits of the prosecutions by simply adding up the number thereof terminating in favor of the Government. When we come to the contested cases we are able to obtain an accurate opinion as to the relative merits of the charge of the Government and the defense of the defendant or claimant.

The cases which are reported and indicate an opinion by the court are illuminating in this connection. Out of approximately 75 such reported criminal cases, the Government was successful in about 50, or two-thirds. Out of approximately 50 reported civil cases, the Government was successful in about 29, or a little over one-half. Of the 8 cases which have been carried up to the Supreme Court of the United States, 5 were decided in favor of the Government and 3 against it.

In respect to the appealed cases the following table shows the approximate results:

APPEALED CASES.			
Judgment of lower court favoring United States.....	28	Judgment of lower court adverse to United States.....	12
Affirmed on appeal.....	24	Affirmed on appeal.....	6
Reversed on appeal.....	4	Reversed on appeal.....	6

Turning again to the reports of the Solicitor of the Department of Agriculture, we find that of the 457 civil cases disposed of in 1915, in 387 decrees of condemnation and forfeiture were entered, and in 34 the claimant succeeded for one reason or another; of the 369 civil cases disposed of in 1914 decrees of condemnation and forfeiture were entered in 333 and the claimant succeeded in 24; in 1913, of the 402 civil cases disposed of, decrees of condemnation and forfeiture were entered in 365 and the claimant succeeded in 10. In 1908, the first year of enforcement, of the 38 civil cases terminated 5 were abandoned and the claimant succeeded in none. In 1910 the count stood 175 in favor of the Government and 6 in favor of the claimant. In that year six cases were discontinued for lack of evidence.

On the other hand, a record of the final disposition of the criminal cases discloses the following:

FINAL DISPOSITION OF CRIMINAL CASES.			
	1915	1914	1913
Total	501	407	848
Fine imposed	220	228	596
Sentence suspended	2	16	45
Information placed on file.....	3	1	1
No fine imposed	3	...	...
Information quashed	1	...	...
Demurrer to information sustained.....	2	2	4
Acquittals	1	7	8
Nolle proseques	98	58	68
Withdrawn, dismissed or barred by statute of limitation	167	95	124
Pleas of not guilty and conviction after trial...	5	8	25

In addition, in 1912, there were 381 convictions as against 23 decisions in favor of the defendant. In 1911 there were 386 favorable and 11 adverse to the Government.

In the years 1909 to 1916, \$106,000, approximately, were collected in fines as a result of the enforcement of the criminal side of this act. The following table shows the relative figures:

TOTAL FINES IMPOSED.							
1916.	1915.	1914.	1913.	1912.	1911.	1910.	1909.
\$15,905	\$10,831	\$10,016	\$23,463	\$14,000	\$16,000	\$11,049	\$5,412
				(about)	(about)		
AMOUNT OF FINES IMPOSED PER CASE.							
Fine.	1915.		1914.		1913.		
	Cases.		Cases.		Cases.		Cases.
\$ 10.....	33		33		100		
25.....	54		41		167		
50.....	38		28		70		
100.....	27		21		43		
150.....	4		..		7		
200.....	7		3		5		
300.....	2		..		..
400.....	1		..		2		
550.....	..		..		1		
750.....	..		..		1		
1,000.....	..		1		..		
1,200.....	..		..		1		
1,500.....	..		1		..		

The fines not indicated were miscellaneous in amount.

These statistics speak for themselves. They are eloquent of the accomplishment of the Federal Pure Food and Drug law in the terms of inspection and prosecution. Uncle Sam has enforced this law vigorously and efficiently. This vigor has been unremitting and vigilant. This efficiency has ever increased. In all the ten years of its history the law has never been administered so wisely or so well as now.

Two striking and instructive conclusions are possible: First, the floodtide of prosecutions has been reached and passed some years ago. The field of prosecution has become more limited. The number of prosecutions will probably reach and hold around a minimum average. Second, the character of the violations has become less reprehensible and more technical. The number of out and out frauds, and of deleterious and unwholesome articles sold, has steadily decreased. The administration of the law has become more refined and scientific.

When it is considered that—with all the vast annual interstate commerce in foods and drugs, subject constantly and everlastingly to a most minute scrutiny and examination—only 978 cases of a violation of this law were deemed of sufficient merit to be reported to the Department of Justice for prosecution during the fiscal year ending June 30, 1916, the American consuming public and food and drug trade may congratulate themselves upon the wholesome and honest character of their food and drug supplies. The evidence is conclusive. Any charge to the contrary is utterly unfounded.

The pure food law after all should be more of a constructive than a destructive force. Uncle Sam always uses his strength to best advantage in helping, in building up, rather than in destroying and tearing down. Uncle Sam makes an excellent policeman, but he is too good a man to waste his entire energy and strength in that direction.

The development of the science of food production, conservation and utilization is the real future of the food law. The punitive or legal side of the law will become of less and less relative importance. Research, science and co-operation between Government and industry, as between Government and agriculture, will be emphasized and realized. Those of us who will be fortunate enough to be spared over the span of two score years or more will witness marvelous developments in the science of foods. A way will be found to join in a harmonious and definite plan of scientific co-operation, brought to a high degree of efficiency, the forces and resources of the states and of the Federal Government.

Little did the framers of this great legislative measure realize or foresee its true future and the incalculable service it would render as a constructive force. And it is interesting and gratifying to note that this true vision of the future of the food law has been appreciated by the administrative officials of the United States Department of Agriculture, and the foundation is already being laid.

A Critical View of the Food and Drugs Act.

During the annual convention at Atlantic City, October 13, of the National Association of Ice Cream Manufacturers, Walter Jeffries Carlin, Esq., counsel for that association, delivered an address on "The Enforcement of the Food and Drugs Act." Lack of space prevents reproduction of the entire address but several of Mr. Carlin's points are worthy of consideration. In his judgment less than one hundred cases of the 4,300 and more cases covered by the notices of judgment so far promulgated, have served to interpret or clarify any section of the Food and Drugs act, and to his mind the question as to when a food product is misbranded or adulterated is one still extremely difficult to answer.

He counsels action designed to bring to the attention of Congress the fact that the public hearing before the Secretary of Agriculture, provided for in section 4 of the Food and Drugs act, has become practically a dead letter.

An important point mentioned is that of the well-recognized lack of a court of review to which importers may resort for adjudication of imports seized on the grounds of adulteration or misbranding.

The question of standardization is discussed at some length, Mr. Carlin's judgment being that the standardization of food products is not only impracticable but was not intended by Congress at the time the Food and Drugs act was enacted.

Some attention is also devoted to public officials who endeavor to substitute their will for the law, an illuminating quotation in that connection being, "All manufacturers I have ever met wish to obey the law, but they want to know that it is the law and not merely the pet theory of some administrative officer."

When speaking of governmental standards of adulteration, Mr. Carlin says: "I cannot help but think that if Congress had realized that by classing as adulterated, foods that were 'filthy, putrid or decomposed,' using there well known words previously incorporated in food acts, they were turning loose on the country an army of theorists each armed with test tubes, petrie dishes and other scientific paraphernalia, we would still be awaiting the enactment of a Food and Drugs act."

Possibly the most interesting of Mr. Carlin's points is the one having to do with the government's use of the conspiracy charge in prosecuting violations of the Food and Drugs act. He points out that violation of the Food and Drugs act is a misdemeanor, the penalty for which is stipulated in the act itself and includes seizure of the goods in question together with a moderate fine or imprisonment, or both. The government has on more than one occasion prosecuted violations under another and different charge, that of conspiring to perform the action which results in the violation of the Food and Drugs act. The punishment for conspiracy against the United States is much more severe than the penalty for violating the Food and Drugs act, just as a felony is a more serious offense than is a misdemeanor. On this point he cites an unnamed court as follows:

"No other error is assigned, but defendant's counsel argues that the method of trial permitted was prejudicial to the rights of defendant. The proposition is that when the government has proof tending to show that defendants have committed a substantive offense, violating some provision of statute, it is not fair to indict and try them for conspiracy to commit that offense. This argument is one to be addressed to Congress, not to the courts."

While to the lay mind it would seem that the extreme difficulty encountered in securing convictions under a conspiracy charge more than offsets the corrective value due to the difference between the respective punishments for misdemeanors and felonies, the point raised by Mr. Carlin (which is also mentioned, but not critically, by Mr. C. W. Dunn elsewhere in this issue) is an interesting one.

The United States meat-inspection service certified to the wholesomeness of 11,220,958,000 pounds of meat from 61,826,304 animals during the last fiscal year. It condemned 348,945 animals and 738,361 parts of animals, equivalent to about 84,320,000 pounds of meat.

Tomatoes in 1917.

That Section of the National Canners Association which is devoted to the subject of tomatoes and of which Mr. F. A. Torsch, of Baltimore, is chairman, and Mr. D. H. Stevenson, also of Baltimore, is secretary, has recently sent to those of their members, who can tomatoes, the following prediction as to probable costs for the coming year.

With the popular indignation at the constantly increasing cost of living manifesting itself in various ways, as every issue of every daily paper eloquently testifies, it is highly important that the manufacturers should approach the subject of increased prices from the point of view of actual figures. If tomatoes are to cost more next year than they did this, the manufacturer must, of course, ask more for his product—but no more of an increase than the circumstances actually warrant. A rise of approximately 31 1/6c a dozen in manufacturing costs, while unfortunate, is at least a definite figure. Every effort should be made to keep down to a minimum all increases in the cost of handling such food products on their journey from the manufacturer's shipping room to the home. All too often, in the past, a moderate manufacturing increase has, because of a panicky condition such as exists at present, been translated by the trade into a far from moderate increase in the final selling price. Such carefully worked out data as is given in the sub-joined statement cannot but have a steadying effect upon the market. The letter to the canners is quoted verbatim.

In 1916 we told you it would cost 80 cents per dozen to pack No. 3 Standard Tomatoes on contracted raw stock, and it did unless you enjoyed special advantages.

In 1917 it will cost a lot more. We have gone over this matter most carefully with the best information at hand from the most reliable sources, and, while at this time it is impossible to figure the exact cost, as prices are not yet named on many articles, yet we have made the following estimate of the increase in cost of packing No. 3 Tomatoes, which we present to you for your most careful consideration. There never was a year when the question of a future price for Tomatoes was harder to determine than it will be in 1917, but whatever you do don't sell at a loss or even at cost as you have so often done in the past.

NO 3 STANDARD TOMATOES.

Estimated increase per Dozen on 1917 Packing.

	Per Doz.
Cans on \$6 basis per box for Tin Plate.....	\$0.12
Cases .....	.01
Labels .....	.0112
Coal and Oil .....	.0075
Leaks, Swells and Rusties.....	.0012
Interest .....	.01
Insurance .....	.006
Brokerage, Discount, Maintenance and Repairs.....	.0163
Labeling, Loading and Unloading .....	.0041
Peeling .....	.0086
Factory Day Labor .....	.0058
	<hr/>
	.2007
Tomatoes (if \$1.00 per ton increase) add.....	.028
	<hr/>
	.2287
Tomatoes (if \$2.00 per ton increase) add ..	.028
	<hr/>
	.2567
If Cans should be on \$6.50 basis (probable).....	.0225
	<hr/>
	.2892
If Cans should be on \$7.00 basis (possible).....	.0225
	<hr/>
	.3117

These figures are conservative. Consider them most carefully before naming any price for 1917.

COST ACCOUNTING COMMITTEE, TOMATO
SECTION, WM. SILVER, Chairman, Jno. R.
BAINES, D. H. STEVENSON.

Legal Principles Underlying the Food Law

Excerpts from an Address by George L. Flanders, Solicitor for the New York State Department of Agriculture, at the Annual Convention of the American Specialty Manufacturers' Association at Pittsburgh, Pennsylvania.

THE United States Government is a Government of conferred or derived powers. It has none other. Police power is not one of the powers conferred; that is inherent in a State, and is the power under which the food laws of the States are enacted and enforced. The power under which the Federal Government acted in enacting the food law was derived.

Congress has power to regulate commerce and to make laws governing the territories. The food law was drawn with these powers as a basis.

In the light of the fundamental principles alluded to, the United States statute relative to foods and drugs was drawn and passed. A brief examination of that enactment indicates that it was enacted in conformity with the constitutional powers and that it provided briefly as follows:

First. That its operation should be confined to the Territories, to traffic with foreign countries and interstate commerce.

Second. That the Secretary of the Treasury, the Secretary of Agriculture and the Secretary of Commerce and Labor shall make uniform rules and regulations for carrying out the provisions of this act, including the collection and examination of specimens of foods and drugs manufactured or offered for sale in the District of Columbia or any Territory of the United States, or which shall be offered for sale in unbroken packages in any State other than that in which they shall have been manufactured, or which shall have been received from any foreign country or intended for shipment to any foreign country, or which may be submitted for examination by the chief health, food or drug officer of any State, Territory or the District of Columbia, or at any domestic or foreign port through which such product is offered for interstate commerce, or for export or import between the United States and any foreign port or country.

Third. It includes foods and drugs within its remedial legislation and defined each for the purposes of the act.

Fourth. It defined adulteration in the case of drugs:

(a) To the effect that they should be considered adulterated if sold under the name recognized in the United States Pharmacopoeia or National Formulary, which differed from the standard of strength or quality of purity laid down in such authorities unless its strength and quality be plainly stated upon the bottle, box or other container.

(b) If its strength or purity fell below the standard or quality under which sold.

Fifth. It defined adulteration in confectionery to the effect that if it contained certain substances, to wit: terra alba, barytes, talc, chrome yellow or other mineral substances or poisonous color or flavor, or other ingredient deleterious or detrimental to health, or any vinous, malt or spiritous liquor or compound or narcotic drug.

Sixth. It defined adulteration in food under six different headings.

The remainder of the statute is administrative in detail and does not affect the general principles underlying the act.

The power in the Territories and the District of Columbia extends to internal commerce and is not confined to regulation and may go to the extent of prohibition, but so far as interstate commerce is concerned it is to be noted that the term used is "regulation," and the meaning of that term has probably not yet been finally determined by the courts. The question reasonably can be raised as to whether the term "regulation" can be construed to mean "prohibition."

The power of regulation is conferred upon Congress to be exercised as a legislative function. In view of the fact that this point is seemingly overlooked at times by zealous persons with laudable motives, I would call attention to the fact that this question has been raised and passed upon by the courts.

This commonly expressed and well-understood rule should not be construed to mean that no power can be delegated to an administrative officer, but simply that power cannot be delegated by the legislative bodies to enact laws or to repeal them or to add to or detract therefrom. Such legislative body may, however, delegate the power to an administrative officer to determine a fact, by virtue of which fact it may be determined whether the law has been violated or not.

A peculiar question is now to be raised as to whether a finding of fact by the United States Governmental authorities shall prevail over and nullify the State finding of fact.¹

An examination of the statute discloses the thread of the principles running through it to be to the effect that it prohibits the sale of drug products that are misbranded or labeled so as to be deceptive; i. e., that are not what they purport to be, either by label or by name. It prohibits the sale of all food products containing any substance which may render the finished product harmful, unwholesome or deleterious.

Other food products which may fall in the category of adulterated products within the definition of the statute still may be sold provided they are labeled to show that they are compounds, combinations, imitations or blends, i. e., so labeled that the consumer will know substantially the kind of product he is getting.

There have been varying views as to the meaning of certain parts of the statute, to-wit: that part providing that products shall be deemed adulterated if they contain any added ingredient which may render the product deleterious. This was challenged in the famous flour case,² and it was there decided that it is not a violation to sell the product simply because it contained an ingredient which of itself might be deleterious, unless it was proven that its addition might render the finished product harmful.

Another case raising a peculiar question as to conflict between State and Federal law was the case of McDermott vs. Wisconsin.³ The State of Wisconsin had passed an act providing how corn syrup should be branded when offered for sale in that State, and providing that it should contain no other markings or brandings whatever. In the opinion of the court written by Mr. Justice Day I find this significant statement:

"The Wisconsin act which permits the sale of articles subject to the regulations of interstate commerce only upon

¹An interesting case in this connection is the present status of benzoate of soda in the state of Indiana. The Indiana State Board of Health, acting under the authority of a state statute, failed to approve the use as a preservative of benzoate of soda; the Federal Referee Board subsequently did approve such use of benzoate of soda. Curtice Brothers Co. sought to enjoin the Indiana state authorities, attacking the validity of the State Board of Health's ruling. The plaintiff lost in the trial court and in the Circuit Court of Appeals, the case later being taken to the U. S. Supreme Court. It was, on February 23, 1916, dismissed on stipulation, the Indiana authorities yielding to the Federal ruling, and so revising their order controlling the sale in Indiana of foods preserved with benzoate of soda. (Supreme Court Reporter, Vol. 36, No. 11, page 447.)

²Lexington Mill & Elevator Co. vs. U. S. (232 U. S. 399).

³McDermott vs. Wisconsin (228 U. S. 115).

⁴U. S. vs. Forty Barrels and Twenty Kegs of Coca Cola, decided May 22, 1916. (Supreme Court Reporter, Vol. 36, No. 15, page 573.)

condition that they contain the exclusive labels required by the statute is an act in excess of its legitimate power." And the further statement, to-wit:

"The legislative means provided in the Federal law for its own enforcement may not be thwarted by State legislation having a direct effect to impair the efficient exercise of such means. For the reasons stated, the statute of Wisconsin, in forbidding all labels other than the one it prescribed, is invalid."

In the Coca Cola case⁴ I find this significant statement by Mr. Justice Hughes, who wrote the opinion of the court:

"A distinctive name is a name that distinguishes. It may be a name in common use as a generic name, e. g., coffee, flour, etc. Where there is a trade description of this sort by which a product of a given kind is distinctively known to the public, it matters not that the name had originally a different significance. Thus, soda-water is a familiar trade description of an article which now, as is well known, rarely contains soda in any form. Such a name is not to be deemed either misleading or false, as it is in fact distinctive. But unless the name is truly distinctive, the immunity cannot be enjoyed; it does not extend to a case where an article is offered for sale under the distinctive name of another article."

Presumptively, other questions will arise under the statute, as the construction given to it by those who enforce it comes in conflict with business interests, and the courts will again be called upon, at great expense to both sides, to pass upon the questions involved. It, therefore, behooves those interested, before invoking litigation, to study with care the wording of the statute, applying the well-settled principles of statutory construction in reaching conclusions.

NEW DEFINITIONS AND STANDARDS.

The following recommendations by the Committee on Cooperation, Definitions and Standards were made to the Association of Official Agricultural Chemists in Washington, D. C., on November 22nd:

Apples.

Evaporated apples are evaporated fruit made from peeled, cored and sliced apples and containing not more than 24 per cent of moisture.

Fats and Oils.

Edible fats and edible oils are such glycerids of fatty acids as are recognized to be wholesome foods. They are dry and sweet in flavor and odor.

Cacao butter, cocoa butter is the edible fat obtained from sound cacao beans either before or after roasting.

Coconut oil, copra oil is the edible oil obtained from the kernels of the coconut.

Cochin oil is coconut oil prepared in Cochin (Malabar).

Ceylon oil is coconut oil prepared in Ceylon.

Corn oil, maize oil is the edible oil obtained from the germ of Indian corn (maize) (*Zea mays* L.).

Cotton seed oil is the edible oil obtained from the seed of the cotton plant (*Gossypium herbaceum*, L. or other species of *Gossypium*).

Olive oil, sweet oil is the edible oil obtained from the sound, mature fruit of the olive tree (*Olea europaea* L.).

Palm kernel oil is the edible oil obtained from the kernels of the fruit of the palm tree (*Elois guineensis* L.).

Peanut oil, arachis oil, earthnut oil is the edible oil obtained from the peanut (*Arachis hypogaea* L.).

Poppy seed oil is the edible oil obtained from the seeds of the poppy (*Papaver somniferum* L.).

Rape seed oil, colza oil is the edible oil obtained from the seeds of the rape plant (*Brassica campestris*).

Soy bean oil, soja oil is the soluble oil obtained from the seeds of the soy bean plant (*Dolichos soja* L., *Soja*, *Hispida*, *Sieb et Zucc.*, *Soga japonica*, *Savi.*, *Blycine hispida*, *Maxim.*, *Glycine Soja* L.).

Sesame oil, gingili oil, teel oil, benne oil is the edible oil obtained from the seed of the sesame plant (*Sesamum indicum*, *De Candolle* L., *Radiatum* *Schum and Thonn*).

Sunflower oil is the edible oil obtained from the seeds of the sunflower. (*Helianthus annuus* L.).

Modifications of Milk.

1. *Sweetened condensed milk* is the product resulting from the evaporation of a considerable portion of the water from milk to which sugar (sucrose) has been added. It contains, all tolerances being allowed for, not less than twenty-eight per cent (28%) of total milk solids, and not less than eight per cent (8%) of milk fat.

2. *Condensed skimmed milk, evaporated skimmed milk, concentrated skimmed milk*, is the product resulting from the evaporation of a considerable portion of the water from skimmed milk, and contains, all tolerances being allowed for, not less than twenty per cent (20%) of milk solids.

3. *Sweetened condensed skimmed milk, sweetened evaporated skimmed milk, sweetened concentrated skimmed milk* is the product resulting from the evaporation of a considerable portion of the water from skimmed milk to which sugar (sucrose) has been added. It contains, all tolerances being allowed for, not less than twenty-eight per cent (28%) of milk solids.

4. *Dried milk* is the product resulting from the removal of water from milk, and contains, all tolerances being allowed for, not less than twenty-six per cent (26%) of milk fat, and not more than five per cent (5%) of moisture.

5. *Dried skimmed milk* is the product resulting from the removal of water from skimmed milk and contains, all tolerances being allowed for, not more than five per cent (5%) of moisture.

6. *Malted milk* is the product made by combining whole milk with the liquid separated from a mash of ground barley malt and wheat flour, with or without the addition of sodium chloride, sodium bicarbonate, and potassium bicarbonate in such a manner as to secure the full enzymic action and by removing water. The resulting product contains not less than seven and one-half per cent (7½%) of butterfat and not more than three and one-half per cent (3½%) of moisture.

The foregoing definitions and standards were adopted by the A. O. A. C. and will be presented to the Secretary of Agriculture for his approval.

Baking Powder.

The committee also reported on baking powder to the following effect:

Baking powder is the leavening agent produced by the mixing of an acid reacting material and sodium bicarbonate, with or without starch or flour. It yields not less than 12 per cent of available carbon dioxide.

The acid reacting materials in baking powder are (1) tartaric acid, or its acid salts, (2) acid salts of phosphoric acid, (3) compounds of aluminum, or (4) any combination in substantial proportions of the foregoing.

NOTE: The announcement of the amount of calcium sulphate which reacts as an acid reacting material in baking powder is reserved pending further investigation. Baking powder materials should be as free from metallic impurities as it is feasible for a manufacturer to make them. The announcement of the limits for arsenic, lead, zinc and fluorid is reserved pending further investigation.

The foregoing was adopted by the A. O. A. C., but will not be sent to the Secretary of Agriculture until after having been passed upon by the American Association of Dairy, Food and Drug Officials.

"The definition, with its accompanying declarations, provides for the use, as ingredients of baking powder, of all materials generally accepted as such ingredients. It leaves the way open to the introduction of staple and wholesome food materials which may for any reason seem desirable, provided such introduction does not contravene the Federal Food and Drugs Act and does not reduce the yield of available carbon dioxide below the accompanying specifications."

Soda Water Flavors.

The definitions and standards for Soda Water Flavors were discussed but not definitely decided upon.

Curtice Wins in Wisconsin

Curtice Brothers Co., Plaintiff,

vs.

George J. Weigle, Defendant.

At the December term of the District Court of the United States for the Western District of Wisconsin, commenced on the first Tuesday of December, 1915, and continued and held on the 23rd day of November, 1916, in the United States Court Room in the city of Madison, Wisconsin.

This cause coming on to be heard at the December term for 1915 of said court on the motion of the defendant to dismiss the bill of complaint for want of equity on the ground that it does not state facts sufficient to entitle the plaintiff to any equitable relief; and the court having, on November 2, 1916, denied said motion and ordered that the plaintiff have a decree according to the prayer of the bill of complaint, but with leave to the defendant to answer the bill of complaint if he be so advised, within twenty days from the date of service upon his solicitors of a copy of such order; and the defendant having come into open court and declined to further answer the bill of complaint—but nevertheless disavowing any claim on his part that either of the statutes of the state of Wisconsin mentioned in the bill of complaint, to-wit, sections 4601g, 4600, 4601, 4601e or 4601f, Wisconsin Statutes, covers or is intended to cover, or in any manner affect sales, offers or exposures for sale, or having in possession with intent to sell, by the importer into the state, in the unbroken outer wooden package enclosing immediate containers, to-wit, bottles or jars, in which they are shipped into said state, any of the plaintiff's food products, either at wholesale or retail, for use or consumption in the state of Wisconsin, on motion of H. O. Fairchild, Esq., solicitor for the plaintiff, W. C. Owen, Esq., and Walter Drew, Esq., solicitors for the defendant opposing.

IT IS ORDERED, ADJUDGED AND DECREED, that the facts set out in the bill of complaint are true as therein alleged; and that the disavowal aforesaid on the part of the defendant is regarded by the court as taking out of the case the subject matter of such disavowal.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED, that said sections 4601g, 4600, 4601, 4601e and 4601f, Wisconsin Statutes are, and each of them is, invalid as applied to any and all sales in said state of Wisconsin by any jobber, wholesaler or retailer of the said food products of the plaintiff mentioned in the complaint, to-wit, ketchup, jellies, jams, preserves, mince-meat, chili sauce and sweet pickled peaches and pears, whether such jobber, wholesaler or retailer within the state purchased the same by the unbroken wooden package from the plaintiff as manufacturer without the state or from a jobber or wholesaler within or without the state, or such sale of the plaintiff's said food products to a retailer to be by him resold within the state to his customers for use or consumption therein, be by the unbroken wooden package or the unbroken immediate container, the single bottle or jar, or whether such sale to the retailer be by the importer of such food products into the state or by a purchaser from such importer, or sales by such retailer be by the unbroken wooden package or the unbroken immediate container, the single bottle or jar; and that such state statutes, so named, are, and each of them is, invalid also as applied to any and all offers or exposures of such food products for sale in such state by any such jobber, wholesaler or retailer, or having in possession by such jobber, wholesaler or retailer therein with intent to sell the same for use or consumption in said state, whether such offer, exposure or having in possession be in such outer wooden package or in such immediate container, the single bottle or jar—the container in all cases herein referred to being unbroken and being the same in which such food product was shipped into such state from another state; and that such state statutes, so named, are, and each of them is, invalid also as applied to restaurant keepers who furnish, in the customary manner to

their guests for consumption at their dining tables or stands any of the plaintiff's said food products, in the open immediate container thereof, to-wit, the bottle or jar, in which said food product was shipped into said state of Wisconsin—such invalidity in all cases covered by this decree resulting because of the fact that said state statutes are, and each section thereof is, as so applied in violation of the commerce clause of the Constitution of the United States and of the provisions of the Food and Drugs Act of Congress of June 30, 1906.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED, that the defendant, George J. Weigle, his agents, inspectors and employees, and all persons acting under his direction or at his instance, including all district attorneys of the state of Wisconsin who may seek to enforce any of said state statutes in this decree particularly mentioned, be, and each of them hereby is, permanently enjoined:

(1) From bringing or threatening to bring any prosecution, or making or threatening to make any complaint as the basis for a prosecution, or from taking or threatening to take any action or proceeding whatever for the enforcement of said Section 4601g or said sections 4600, 4601, 4601e, 4601f, or either of such sections, of the Wisconsin Statutes, insofar as they do, or either of them does, or may be construed to declare as an adulteration or illegal the use of benzoate of soda as a preservative ingredient in any of the plaintiff's said food products, which have been sold and brought into the state of Wisconsin from another state, and have been or are being sold, shipped, consigned, offered or exposed for sale in said state, or had in possession therein with intent to sell, either in the said outer wooden container or the said immediate container thereof, either at wholesale or retail, for use or consumption within said state, or have been or are being furnished in the customary manner by restaurant keepers to their guests for consumption at their dining tables or stands in the open immediate container thereof, the bottle or jar aforesaid, in which such product was shipped into the said state of Wisconsin;

(2) From declaring or, in any manner, intimating to any retailer, engaged in the sale in the state of Wisconsin of any of the plaintiff's said food products containing benzoate of soda as a preservative, by the unbroken bottle or jar, being the same immediate container in which such product was imported into said state, or to any restaurant keeper who is furnishing in the customary manner to his guests for consumption at his dining tables or stands any of the plaintiff's food products in the open bottle or jar, being the same immediate container in which such product was shipped into the state, or to consumers thereof, that such sale by the retailer, or such furnishing to guests by the restaurant keeper is illegal or unauthorized, because in violation of said section 4601g or either of the other said sections of the Wisconsin statutes.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that a writ of perpetual injunction be issued out of and under the seal of this court, in this suit, restraining said George J. Weigle, his agents, inspectors, employees and all other persons acting under his direction or at his instance, including all district attorneys of the state of Wisconsin who may seek to enforce any of said state statutes in this decree particularly mentioned, from the doing of any of the matters or things hereinbefore enjoined not to be done; and that service of said writ be forthwith made upon said George J. Weigle, or in lieu thereof that a certified copy of this decree be forthwith served upon said George J. Weigle.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED, that the plaintiff, Curtice Brothers Co. do have and recover of and from the defendant, George J. Weigle, the sum of twenty-five dollars, its costs and disbursements herein taxed.

By the Court,

A. L. SANBORN,
District Judge.

Margarine in 1916.

Under a date line of November 25, the "New York Journal of Commerce" prints the following interesting summary of the important subject of the growth of the margarine industry:

"The Department of Internal Revenue in figures just made public reports that during the fiscal year ended June 30, 1916, there was produced in this country a total of 145,760,973 pounds of uncolored oleomargarine, of which 145,443,578 pounds were withdrawn tax paid at one-fourth cent, as against 138,241,907 pounds produced and 137,693,610 pounds tax paid during the fiscal year ended June 30, 1915, thus showing a net increase of 7,546,066 pounds in the production and 7,749,968 pounds in the withdrawals tax paid during 1916.

"In 1916 a total of 6,748,940 pounds of colored oleomargarine was produced, of which 3,403,287 pounds were tax paid at 10 cents, 2,561,613 pounds withdrawn free of tax for export and 746,281 pounds withdrawn free for use of United States as supplies for governmental institutions, as compared with 7,595,141 pounds produced, 3,753,012 pounds tax paid at 10 cents, 3,081,356 pounds exported free of tax and 734,030 pounds withdrawn free for use of the United States during 1915.

"Collections from all oleomargarine sources in 1916 amounted to \$1,485,970.72, which includes \$558,349.33 from stamp tax at 10 cents per pound, \$366,350.58 from stamp tax at one-fourth cent per pound and \$561,270.81 from special taxes.

"Investigations of violations of the oleomargarine law were continued during the year and while no cases of the same magnitude in fraud as those reported during the two preceding years were discovered, a large number of cases involving the illicit coloring of white oleomargarine by dealers were discovered and the offenders prosecuted and convicted. A summary of the results of the investigations made during the fiscal year 1916 shows 66 violations by manufacturers, 28 by wholesale dealers, 1,789 by retail dealers, or a total of 1,882, compared with a total of 2,777 violations during 1915.

"During 1916 prosecutions resulted in the conviction of 10 manufacturers, 1 wholesale dealer and 2 retail dealers, and acquittal of 4 manufacturers and 2 retail dealers, while 7 cases of illicit manufacture, 5 violations by wholesale dealers and 48 by retail dealers were compromised, leaving 60 cases pending.

"Fines aggregating \$38,751 were imposed in cases where convictions were secured, in addition to prison terms, and there was paid in compromise of violations a total of \$14,090.90.

Adulterated Butter.

"A total of 147 cases against manufacturers, 28 against wholesale dealers and 38 against retail dealers in adulterated butter were discovered and reported during the year, making a grand total of 213 violations, as against 30 cases against manufacturers, 5 wholesale dealers and 5 retail dealers, or a total of 40 during 1915. All but 26 of these reported violations consisted of the manufacture and sale of butter as creamery butter which was subsequently found to contain moisture of 16 per cent or more.

"Prosecutions were instituted in the twenty-six cases where the evidence showed the dealers had purchased creamery butter, manipulated it, and added abnormal quantities of water ranging from 30 to 50 per cent and afterwards sold the product as pure creamery butter, and these offenders were convicted in every instance. This class of violations has grown with considerable rapidity in some of the large cities, and the indications are that it will take vigorous efforts to suppress this illicit traffic.

"The law as it stands, says the Collector, works entirely too severe hardships upon manufacturers of butter who unknowingly and unintentionally place on the market butter containing 16 per cent or more of moisture, and likewise imposes unduly harsh penalties in the form of special taxes upon dealers who handle such butter.

Renovated Butter.

"There was a slight decrease in the production and with-

drawal tax paid of renovated butter during the year; 34,514,527 pounds produced and 34,572,335 pounds withdrawn tax paid, as compared with 39,056,180 pounds produced and 38,924,828 pounds withdrawn tax paid in 1915, a net decrease of 4,541,653 pounds in the production and 4,352,493 pounds in the quantity tax paid.

"Collections from renovated butter amounted to \$88,760.89, as compared with \$99,612.50 in 1915. No violations of the law relating to renovated butter were reported during 1916."

Margarine in Canada.

There is a Canadian law which prohibits both the manufacture and sale of margarine in that country. Owing to the scarcity of butter and its consequent high price there is a movement on foot to have the law repealed. The "Canadian Grocer" has been canvassing trade opinion in the matter and finds a preponderance of opinion in favor of allowing the product in the market. Editorially it says:

"There seems no question that oleomargarine is a perfectly pure food product, and though possibly not having quite the food value of butter, it is composed of ingredients that are both healthful and nutritious.

"It is urged, therefore, that oleomargarine would be of considerable advantage to the Canadian public, and there is little doubt that it would be stocked by both wholesaler and retailer were it not for the fact that the Canadian statute books carry a law prohibiting its manufacture and sale within the Dominion.

"With a view to discerning whether the condition still existed, and whether the law could be repealed without disorganizing to a too great extent the established production and trade in butter, we have discussed the matter with a number of wholesale produce merchants and retailers. The consensus of opinion seemed to be that the introduction of oleomargarine would at least, in a measure, alleviate the present conditions and enable the poorer classes to reduce the high cost of living to that extent."

Report of Cold Storage Holdings of Creamery Butter, November 1, 1916.

Reports from 179 cold storages show that their rooms contain 82,269,098 pounds of creamery butter as compared with 95,640,774 pounds in 205 storages on October 1.

The 142 storages that reported holdings on November 1st of this year and last show a present stock of 79,294,074 pounds as compared with 92,718,649 pounds last year, a difference of 13,424,575 pounds or 14.5 per cent.

The reports of 152 storages show that their holdings decreased 14 per cent during October as compared with the decrease of 17.5 per cent during September.

Report of Cold Storage Holdings of American Cheese, November 1, 1916.

Reports from 186 cold storages show that their rooms contain 32,339,024 pounds of American cheese as compared with 35,195,399 pounds in 208 storages on October 1.

The 126 storages that reported holdings on November 1st of this year and last show a present stock of 24,135,770 pounds as compared with 24,393,723 pounds last year, a difference of 257,953 pounds, or 1.1 per cent.

The reports of 158 storages show that their holdings decreased 2.5 per cent during October as compared with the increase of 1.5 per cent during September.

Report of Cold Storage Holdings of Eggs, November 1, 1916.

Reports from 186 cold storages show that their rooms contain 2,877,541 cases of eggs as compared with 4,589,593 cases in 217 storages on October 1.

The 152 storages that reported holdings on November 1 of this year and last show a present stock of 2,794,295 cases as compared with 3,686,533 cases last year, a difference of 892,238 cases or 24.2 per cent.

The reports of 168 storages show that the holdings decreased 25.1 per cent during October as compared with the decrease of 12.1 per cent during September.

The Manufacture of Salt

BY THE EDITOR.

THE manufacture of salt is not a very complicated process. Sodium chloride (common salt) is generally found accompanied by other salts such as calcium sulphate, magnesium carbonate, calcium carbonate, calcium chloride, magnesium chloride and potassium chloride. When found, as is often the case, in the form of comparatively pure rock salt and relatively near the surface, it is obtained by mining in a manner very similar to that employed in the winning of coal. If the salt deposit is at a considerable depth, it is dissolved in water forced down from above, the resultant brine being pumped to the surface and the water evaporated therefrom. The recrystallization so brought about effectually purifies the product. Rock salt mined as such is not purified.

The art of the salt refiner is practically limited to the separation of the chloride of sodium from the other chlorides, the sulphates and the carbonates with which it is intermingled and the bringing to the market of the finished product at the least possible expense. Salt manufacture is essentially a business of large units. The value of salt per pound is not great and in consequence manufacturing costs must be held down to the minimum consistent with good work. Salt working equipment is expensive and subject to hard usage, mechanically in the case of rock salt mining, and chemically when working with brine, the corrosion of all metal parts being an item of considerable expense for replacements.

Generous deposits of salt are found in all parts of the world. With the exception of a few subterranean lakes, or pockets of brine, the great bulk is found in the form of rock salt ranging, as to purity, from the wonderful Louisiana deposit which runs 99.6% to 99.8% sodium chloride, to mixed deposits of various salts so intermixed with marl as hardly to pay the cost of extraction. One of the most famous salt mines is that at Wieliczka in Galicia. It is of good quality and of moderate depth, being from 200 to 900 feet deep. It has been worked continuously since about 1000 A. D. There are important rock salt deposits in Siberia, Palestine, Ireland, England, India, Spain and at Strassfurt, Germany, the last named showing 16 different layers, or strata, of marine deposits of salts.

Rock salt is produced by deep-shaft mining in the eastern, central, and southern parts of the United States. There are salt mines in Michigan, New York, Kansas, and Louisiana, this last being remarkable from the combined point of view

of its purity, its great size, its proximity to the surface, and its shape, which is that of a huge cone some 2000 feet deep. This deposit is estimated to consist of over two billion tons of salt which contains about 99.5% sodium chloride, the top of the deposit being within 14 feet of the surface. It has been worked since 1862, the first shaft having been sunk in 1869.

The first salt mining in the northern states was done at the Retsof mine in New York, the salt stratum being about 1000 feet down. The same type of salt is also mined at Halite, New York. The only mine in the Michigan salt field is near Detroit and it has the distinction of being the deepest salt mine in the world, the main vein being 1150 feet below the surface. The four Kansas rock salt mines are at Kanopolis (3) and Lyons, the earliest mine in that district dating back to 1890.

In addition to the foregoing there are deposits of salt which are worked by the artificial brine method of extraction in Texas, Ohio, California, Utah, Idaho, New Mexico, Nevada, Oklahoma, Pennsylvania, Virginia, and West Virginia.

Great strides have been taken in the methods of making high-grade salt, both by the grainer and the vacuum pan processes. The mechanical grainers, in which the brine enters the plant and is not touched by hand till it is almost ready for shipment, are marvels of ingenuity. Fine table salt is now made almost exclusively by the vacuum pan process. These evaporators have so reduced the cost of making fine salt that the old-time methods have long since been abandoned.

In fourteen states of this Union salt of all grades is made, from the lump salt used in salting cattle to the finest grades for table and dairy. Our supply of salt is practically inexhaustible, and not only can this country supply her own needs indefinitely, but also those of the world for a long time to come. The marketed production of salt in the United States in 1915, including Hawaii and Porto Rica, was 38,231,496 barrels of 280 pounds each or 5,352,409 short tons, valued at \$11,747,686. The average price of salt in 1915 was 31 cents per barrel or \$2.19 per ton. During the last five years the price of salt, as well as the marketed production, has been slowly increasing.

The following charts give in concise form the essential data concerning salt sold in the United States during the year 1915:

THE MARKETED PRODUCTION OF SALT IN THE UNITED STATES IN 1915.

(The short ton is used—2,000 pounds; a barrel of salt is 280 pounds.)

Quantity Man- ufactured. (Evaporated.) Barrels.	Quantity of Brine Sold as Such. Barrels.	Quantity of Rock Salt. Barrels.	Total Quantity. Barrels.	Tons.	Total Value.	Average Price		Exports.
						Per Bbl.	Per Ton.	Bbbs. Value.
16,684,456	13,222,848	8,324,192	38,231,496	5,352,409	\$11,747,686	\$0.31	\$2.19	574,816 \$613,850

PRODUCTION BY STATES, LISTED IN THE ORDER OF THE VALUE OF THE PRODUCT.

(A barrel of salt weighs 280 pounds; a ton 2,000 pounds.)

State.	Number of Operating Plants.	—Total Salt in 1915.—		Value.	Av. Price Per Ton.	
		Barrels.	Tons.		Rock.	Brine.
Michigan	27	12,588,788	1,762,430	\$4,304,731	\$2.02	\$2.43
New York	26	11,217,471	1,570,446	2,976,405	1.95	1.86
Ohio	10	5,880,243	823,234	1,462,192	....	1.78
Kansas	10	3,765,164	527,123	1,035,879	1.34	2.55
California	25	1,048,457	146,784	694,070	3.98	4.73
					(a) 2.50	
Louisiana (b)	2	....	....	....	2.52	....
Texas	5	444,978	62,297	345,944	....	5.55
Total brine and rock salt.....127					\$1.97	\$2.26

(a) Crude solar salt, which constitutes about 80 per cent of the State's output.

(b) As but two companies are operating in the State, in order to keep the returns of these companies confidential the Government does not give the States' output separately. The only limit to the output of Louisiana salt is the demand.



View taken in the salt mine on Avery Island, Louisiana. This cathedral-like excavation is fashioned from almost absolutely pure crystalline rock salt and is a most imposing sight. In the foreground are to be seen the narrow gauge railway tracks used for the transportation of salt.

It is quite impossible to give any data as to the discovery or first use of salt. Undoubtedly, pre-historic man used it. It is mentioned in the earliest recorded history but in such a way as to convey the idea that its use was even at that time regarded as a racial characteristic.

Salt obtained from the sea, probably the first source made use of by early man, is commonly known as "solar salt," because of the method employed to evaporate the water. It is not to be classed as a product of scientific achievement. The product is a coarse variety and is used chiefly for salting fish. In some countries, notably China, France, Portugal, Spain, Italy, the West Indies, Central America, South America, and the Pacific coast section of this country, great quantities of salt are still produced by the simple process of allowing the sunshine and warm winds to evaporate impounded sea water to comparative dryness.

The "salt gardens" of the Mediterranean Sea countries are solar salt factories and are objects of interest to tourists, although Americans need go no farther afield than California in order to see practically the same sort of thing.

There are other methods equally crude for the utilization of the salt of sea water. On the continent graduation towers are sometimes met with, they being stacked piles of

tree branches over which sea water is allowed to trickle in an effort to accelerate the evaporation by wind and sunshine of the water in the brine. The brine so concentrated is later dried in heated open pans.

In cold countries, Russia and Scandinavia, especially, the thrifty natives take advantage of the fact that ice formed from sea water is relatively fresh. By impounding small quantities of sea water and repeatedly allowing it to freeze, the remaining unfrozen brine finally becomes sufficiently concentrated to warrant "boiling off" to a dry state. As contrasted with the leisurely action of sun and wind the simplest form of intensive salt recovery is that of the open kettle process. It is just what its name denotes. A trifle more business-like is the direct heat pan process, the pan being of considerable size and heated by a furnace placed below it and at one end. Much good salt has been made by the direct heat pan method. It is the immediate predecessor of the modern "grainer," the only essential difference being in the method of applying the heat. It was in the days of the popularity of open pan salt making that "hopper salt" (produced by the addition to the brine of small amounts of alum) was a common term. Another expression dating back to those days is that of "poisoning the pan," which isn't quite so bad as it sounds as the poisoning consisted of nothing more serious than the use of glue or gelatine (some form of colloid) to clarify the brine before recrystallization set in.

Naturally the first step in rock salt mining, as in all mining, is to find the salt. Despite the almost complete absence of fossil remains in salt deposits, it is pretty generally agreed that such deposits are of marine origin. Being of sedimentary nature, it is not difficult for the geologist to point out likely districts for salt exploration. Preliminary drilling of an investigational nature is carried on until a sufficiency of data as to the depth and quality of the salt deposit is in hand. As an illustration of actual field work, the following quotation is of interest:

"The Short Grass Oil & Gas Co. recently reported to the government that it had developed 600 feet of rock salt in a well in Clark county, Kansas. The top of the salt was struck at a depth of 690 feet and the topmost stratum of



The hoisting apparatus controlling the reciprocal motion of the cages in the Retsof mine.

salt was 60 feet thick and capped by limestone 12 feet in thickness. The next lower bed of salt was 158 feet thick with a thin bed of limestone between it and the overlying salt bed. Below this thick bed the salt layers varied in thickness from 5 to 30 feet. No water was encountered in the well from 500 to 2,900 feet, at which depth a small quantity of salt water was found in sand. From 3,300 to 3,700 feet a great deal of strong brine was encountered, and the well caved in, making it necessary to case down to about this lower level."

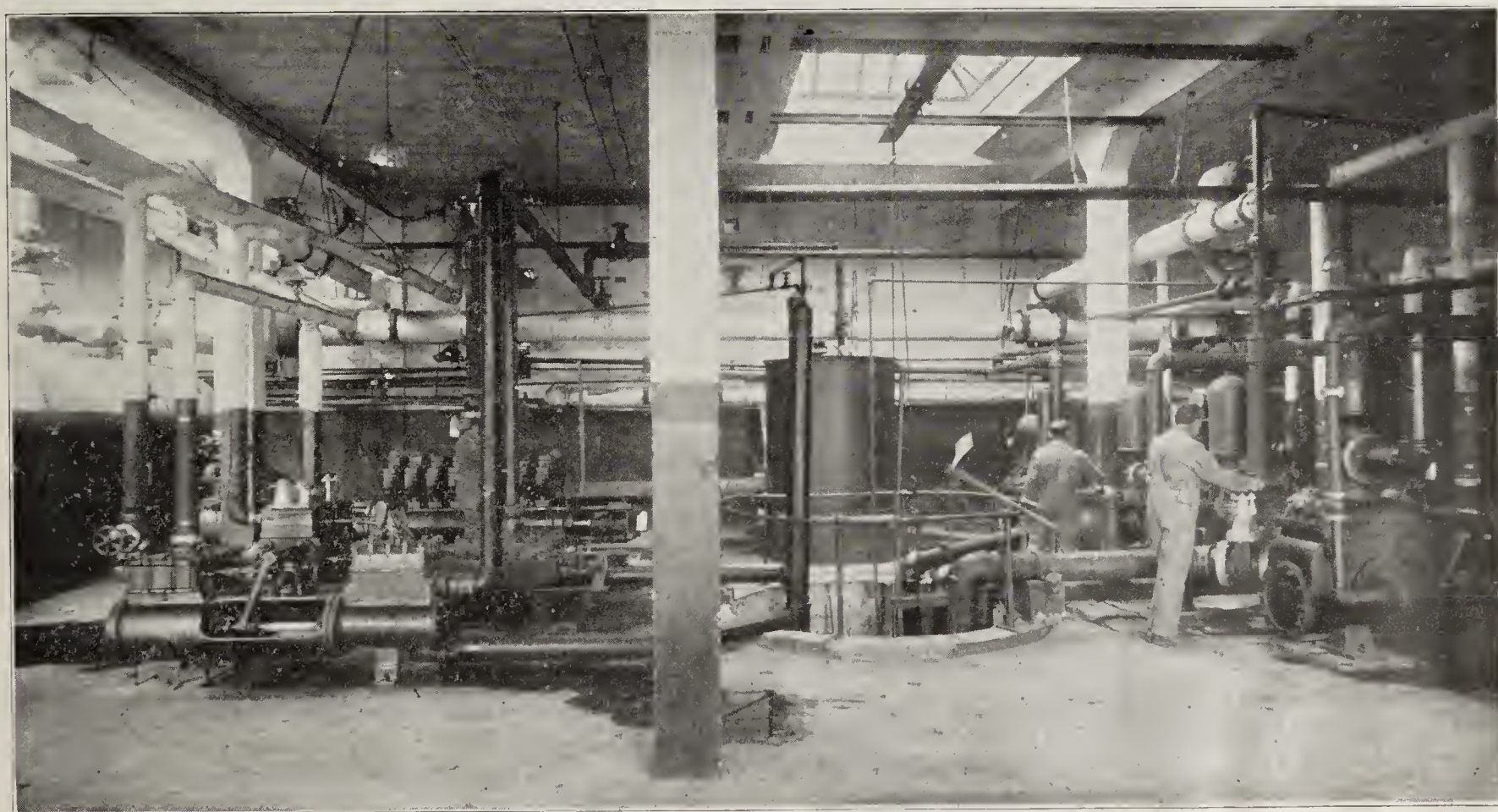
When the depth and quality of salt deposit is determined, a shaft some 20 by 8 feet in cross section is sunk by the usual mining methods. If, as was the case in Michigan, underground water or quicksand is encountered the extremely clever expedient of running refrigerating pipes through the troublesome section is resorted to and the quicksand frozen solid and kept in that condition until the shaft is in and completely concreted. In some instances liquid concrete is forced into troublesome pockets of quicksand and allowed to set before proceeding with the work of excavation. The shaft is carried down to and through the salt vein or stratum. The usual "sump pit" is excavated at the foot of the shaft to receive drainage water. The usual means of conveyance both for the workmen and for the excavated salt is a pair of huge elevators, or "cages," which travel reciprocally, their motion being controlled by a power driven reel in the power house at the head of the shaft. Needless to say, such cages are strongly made, and are held by steel cables an inch and a half in diameter. At the foot of the shaft, galleries are mined into the salt generally in all four directions. The first cutting is often done by means of an undercutting saw which eats into the salt a foot or so from the level of the bottom of the shaft. As soon as there is room to work in, compressed air drills are used, six to eight foot holes being driven parallel to the floor of the mine and a foot or so above it. Low power dynamite is used to break down the salt and this process is repeated until the upper surface of the vein is reached. As the work progresses, chambers, such as those shown in the accompanying illustration, are excavated, enough of the salt deposit being left in its original position to serve as pillars. The salt dislodged by the dynamite is in all sizes. Chunks too large to handle are broken by hand or more dynamite. Small cars on rails, drawn by mules or driven by electricity, carry the salt to the foot of the shaft and thence up by

means of the elevator to the tipple at the head of the shaft. Here the mine run salt is dumped upon a grating which allows all but the largest lumps to go through. Such lumps are sold as they are for use with cattle. The miscellaneous sized salt goes to the crusher which is a set of corrugated rollers, and thence, automatically, to the shaker sieves which separate the coarse, medium sized and small particles of salt into their respective grades which are given arbitrary type names. The finest dust is removed by drafts of air from a blower. Rock salt when first brought to the surface is very brittle, and not until after exposure to the air has toughened it is it handled any more than is absolutely necessary.

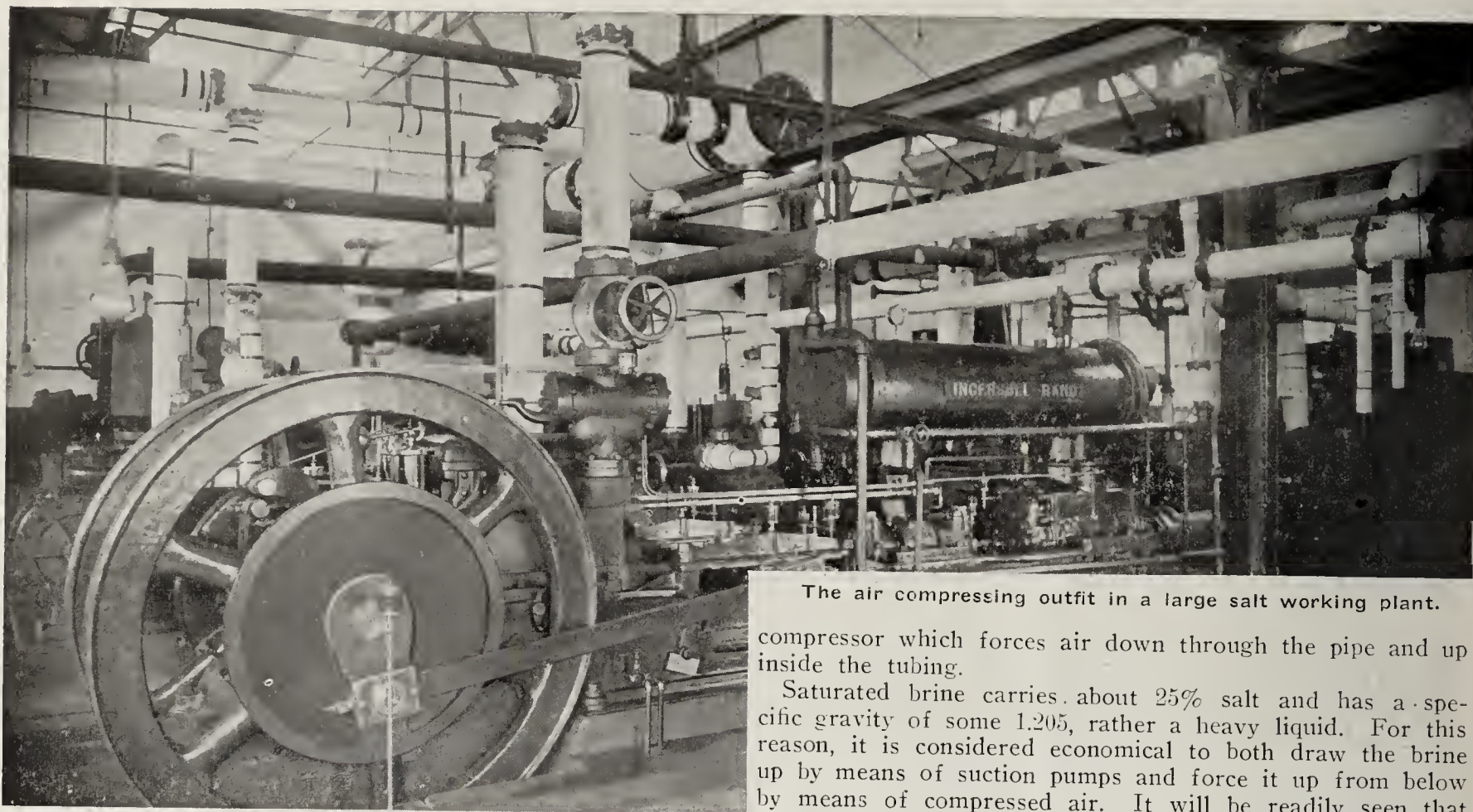
A salt well is drilled in practically the same manner as are drilled wells for gas and oil. The equipment consists essentially of the following members: a derrick equipped with a hoisting apparatus driven by a steam engine; a walking beam, the purpose of which is to raise the drill; a drum, the "bull wheel," which controls the cable attached to the drill; a screw connecting link, with a five-foot play, between the end of the walking beam and upper end of the cable; a wooden pile driver head for attachment to the walking beam; a bailer, which is generally a ten-foot piece of pipe about six inches in diameter with a single action valve at its lower end; and, finally, the drill itself, which is a solid steel cylinder weighing from one to two tons and provided with a chisel edge from ten to twelve inches in length.

The play of the walking beam is utilized to raise the drill a sufficient height so that its own momentum in falling will be sufficient to break up any rock which may be encountered on the way down to the vein of salt. The five foot connection permits that amount of elongation in the total distance from the end of the walking beam to the bottom of the drill without readjusting the apparatus other than by simply working the adjusting screw on the threaded connection. As the drill forces its way down by five foot lengths, the bailer is brought into play to remove broken fragments of rock and earth pulverized by the action of the drill, such matter generally being in a fluid condition after the first few feet down. The contents of the bailer as it reaches the surface are regarded as samples of the formation through which the drill is passing and are carefully checked against the geologist's plot of the district.

As there is every likelihood of encountering water be-



View of the pumping plant in a large brine working salt refinery.



The air compressing outfit in a large salt working plant.

tween the surface of the ground and bed rock, it is customary to insert the casing, which is a heavy pipe of some ten inches in diameter, simultaneously with the drill. The casing pipe is placed in position by tackle rigged to the upper part of the derrick and, when necessary, is driven down by means of the pile driver head, which is attached to the walking beam for that purpose. The casing pipe usually is protected on its lower edge by a tempered steel shoe, the shoe being sufficiently sturdy to permit its being driven into bed rock when that stage of the drilling is reached. With the well driven to bed rock and the casing in place and driven home so as to be water-tight, the drilling becomes somewhat simpler. Seldom is it necessary to encase the lower part of the well until it is all finished. Nor is it considered necessary to make the lower part of the well as large as is the upper part. A smaller drill is used and the drilling is continued down through and to the bottom of the salt deposit. Then, and not until then, a casing pipe some six inches in diameter is inserted, the joint between the upper casing and the lower casing being very carefully made by means of what is termed a "bottom hole packer." This is essentially a reducing sleeve with heavy rubber gasketing. It is lodged against a shoulder left in the rock at the point where the lower part of the well commences. Thus the completed well consists of a hole in the ground extending from the surface to the bottom of the salt deposit and with a diameter of some ten inches from the surface to bed rock and about six inches from there down, the whole encased with heavy iron pipes of corresponding sizes.

When the casing is in, the well is provided with a tube of iron pipe from three to five inches in diameter, the lower joint of which is well perforated. Inside the tube is a one-inch pipe, the lower fraction of which consists of a "U" bend. The upper end of the casing is supplied with what is called a "casing head," to which is screwed the tubing and the smaller pipe. Connections are so made that water can be either forced down or pumped up from the tubing and the inside pipe is connected with an air compressor.

Water is forced down between the casing and the tubing and comes in contact with the rock salt just below the bottom of the casing. As the salt dissolves there is formed a cavity and before long the water becomes saturated with salt. The brine because of its specific gravity finds its way to the bottom of the cavern. Pumps are then started, both the suction pump, which works on the brine itself, and the

compressor which forces air down through the pipe and up inside the tubing.

Saturated brine carries about 25% salt and has a specific gravity of some 1.205, rather a heavy liquid. For this reason, it is considered economical to both draw the brine up by means of suction pumps and force it up from below by means of compressed air. It will be readily seen that there is good reason for continuing the well down to the bottom of the salt deposit, the saturated brine finding its way to that part of the workings because of its own weight.

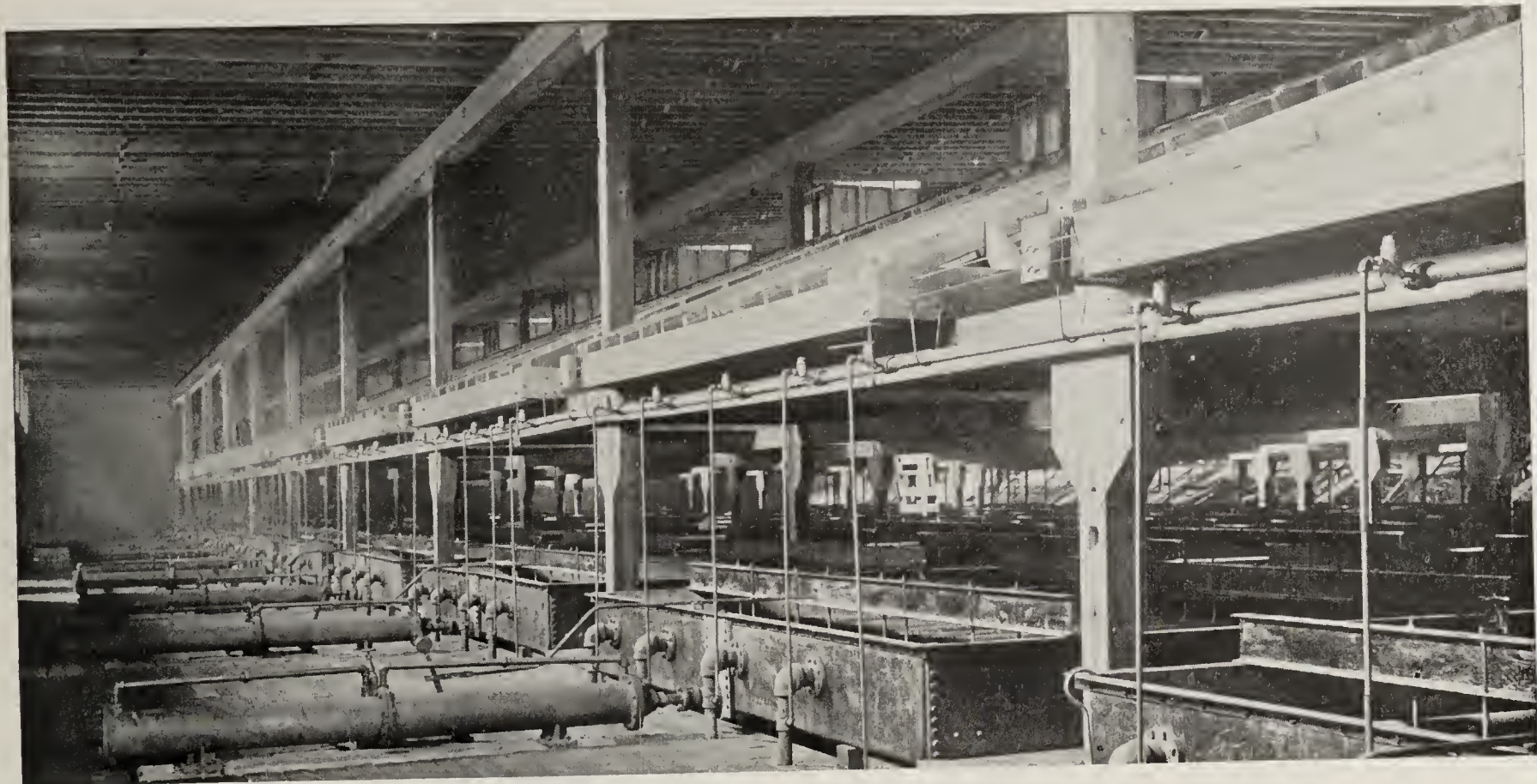
As the brine comes to the surface, it contains many substances other than sodium chloride. Some of these, particularly the other chlorides, the carbonates and the sulphates, are held in *solution*, and some are held in *suspension* in the same fashion as a swift-flowing river carries with it much in the way of insoluble matter. The insoluble matter is largely sand and metallic oxides.

The fresh brine is held for a considerable length of time in a huge tank, the purpose of which is to allow the insoluble matter held in suspension to settle to the bottom of the tank. When the solution is sufficiently clear it is decanted into a second tank and it is here that the brine is treated chemically for the removal of all remaining impurities. The work's chemist by careful analyses determines the nature and amount of such soluble impurities and by the use of gentle heat and the addition of appropriate chemicals is enabled to precipitate them from the brine.

The purified brine then goes to the grainer or to the vacuum pan. The grainer process is a development of the open kettle method of making salt while the idea of using vacuum pan evaporation for the recrystallization of the salt was borrowed from the sugar refiners. Both methods are based upon the fact that substances which form crystals can be obtained in a state of comparative purity by allowing such crystals to form in the mother liquid. Both processes also make use of the fact that the higher the temperature of crystallization, the finer the crystal formed.

The grainer may be described as a trough of steel, wood or other material, 12 to 18 feet wide and from 90 to 150 feet long. Steam pipes suspended a few inches from the bottom of the grainer and running its full length transmit the requisite heat to the brine. Brine, purified in the settling tank, is run in to a depth of about 14 inches, and a float valve automatically permits enough fresh brine to be delivered to the grainer to make up the loss from vaporization. As the brine becomes warmer the water commences to evaporate, and soon a degree of saturation is reached which brings about the crystallization of the salt. The first crystals form on the surface of the brine and sink to the bottom of the grainer, whence they are slowly pushed to a sloping drain board at one end of the grainer by means of an automatic, feathering rake.

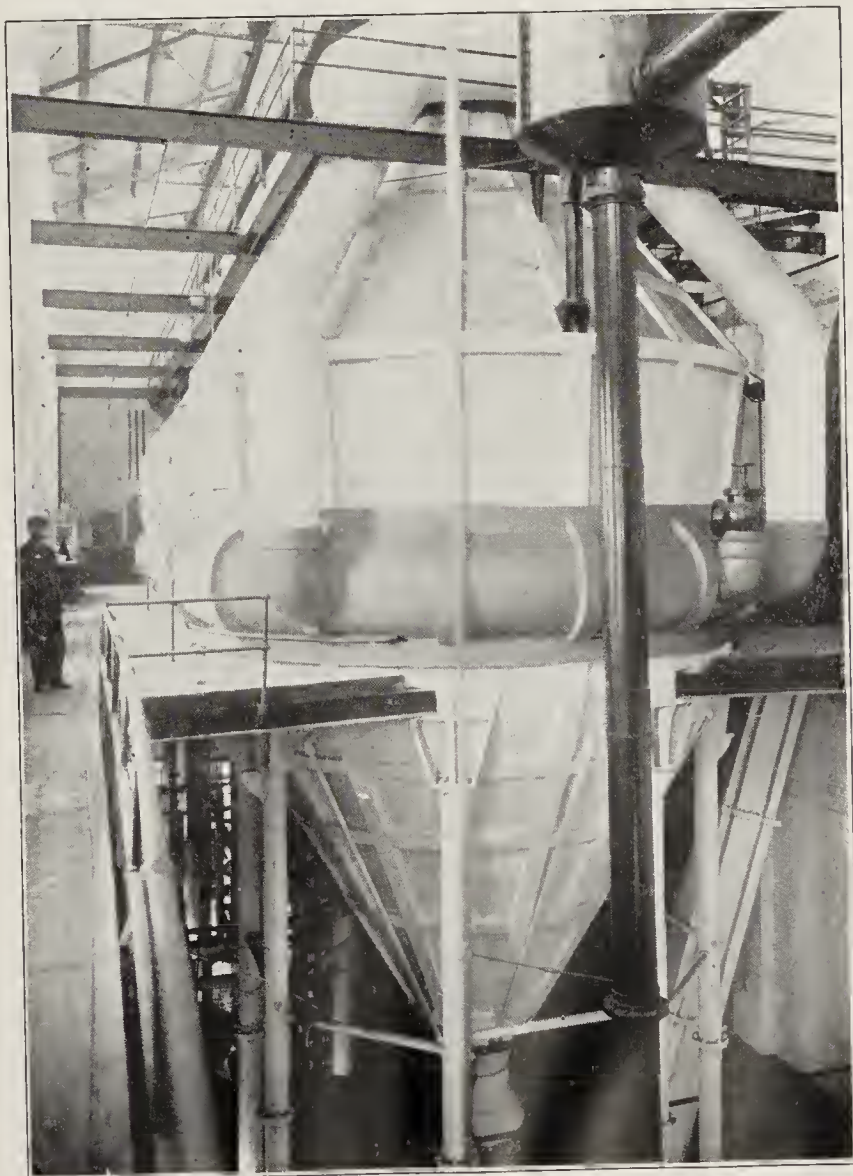
The vacuum pan is used for two reasons. One, because of the excellence of the product so produced, and the other,



View of the largest grainer in existence.

because it is cheaper to maintain a partial vacuum in a moderately heated closed kettle than it is to generate the very much greater degree of heat necessary to bring about the same evaporation in an open kettle. As is generally known, pure water, under normal conditions, boils at 100° Centigrade = 212° Fahrenheit. By normal conditions is meant the pressure of the atmosphere at sea level, which is approximately 15 pounds to the square inch. At this pressure diminishes, the boiling point of pure water is lowered. As is also generally known, the presence of any substance in solution raises the boiling point of the mixture. Thus it is seen that there are two physical laws which must be borne in mind for the economic evaporation of salt brine in a vacuum pan, and the whole argument hinges upon the price of coal. Generally speaking, however, it is cheaper to exhaust a part of the air from the upper half of a closed kettle than it is to generate the considerably greater amount of power necessary to bring about the same results at atmospheric pressure. As the accompanying illustration shows, the word "pan" is something of a misnomer. The modern vacuum pan is of various shapes and sizes, and is made of various metals. In the salt industry cast iron is generally used, and the pans are of considerable size, ranging from 60 to 80 feet high with a diameter of from 10 to 25 feet. As will be noted, the "pan" consists of two cones, set base to base on a short cylindrical section. In this cylinder are many hundreds of copper flues, open at both ends. The brine is run into the pan in sufficient quantity to fill the lower cone and that part of the cylindrical section which carries the tubes. Steam is then allowed to enter through various openings into the middle section, and at the same time the air upon the brine is rarefied by means of a suction air pump. The lessened atmospheric pressure so brought about permits the brine to boil at a lower temperature than would otherwise be the case. As the brine boils it, of course, throws off vapors which would, unless otherwise taken care of, soon counteract the influence of the air pump and would bring about the existence of normal air pressure within the vacuum pan. In a single effect pan such vapors are withdrawn through a valve to a condenser. In a multiple effect pan, the vapors from one pan are used to heat the pan next to it the air pressure in the second pan being somewhat less than that in the first pan. The steam condensed in the first pan produces approximately an equal amount, by weight, of vapor from the brine. This vapor when used in the second pan is condensed, and, in turn, produces another equal quantity of vapor from the brine in that pan, it being remembered

that the air pressure in the second pan is somewhat less than that in the first. This process of using the same steam can be carried on with three or four or even more pans, each pan in the series being held at a higher vacuum than is the preceding pan. In a set of four vacuum pans, well insulated, one pound of steam can be made to evaporate 3.75 pounds of water. It is not entirely unlike the triple expansion engine in steam engineering. To maintain the nice balance



A modern triple effect vacuum pan used for salt refining.

between temperature and pressure in the several pans the services of expert attendants is necessary. Vacuum pans are sensitive to the slightest changes in temperature and a few minutes of inattention may mean hours of shut-down. Although the vacuum pan has long been used by sugar makers and others, its first appearance in the salt industry was in 1887. Since then its use has constantly increased and it bids fair to displace all other salt manufacturing processes.

The salt as it comes from the evaporators—either grainer or vacuum pan—carries with it considerable moisture. It is accordingly conveyed to bins so arranged as to permit the draining off of all excess brine, which brine is returned to the evaporators and later crystallized. After thorough draining in the bins the salt is transferred to the floor of the curing room, where it is piled in mountainous heaps. Although there is no hard and fast rule as to length of time for such curing, it is the custom in this country to hold the salt for about a month. The foregoing applies to the grades of salt other than those destined for dairy or household use. Such salt is further processed as noted below.

During the process of shoveling the cured salt into barrels or bags very nearly perpendicular faces form in the heaped up salt and in days gone by on more than one occasion workmen have been buried when these salt cliffs collapsed. To obviate this danger the idea was conceived of drilling holes by means of an electrically driven auger near the floor, sufficient salt being so withdrawn from the pile as to bring about a more gentle collapse and one without danger to the workmen.

Many types of salt are, after being thoroughly air-cured, passed through a drier. In most instances the form employed is a slightly inclined steel cylinder supplied with a central tube through which heat passes. The drier is slowly revolved by gears. The inside surface of the cylinder is supplied with baffle plates which, as the cylinder revolves, drop the salt upon the hot central pipe. Salt discharged from such a drier is practically free from moisture other than the water of crystallization. By means of bucket elevators the dry salt is conveyed to a series of screens of different mesh which automatically grade the salt according to size of crystals.

Salt for the American housewife is now the best product of the vacuum pan. After being crystallized at a high temperature it is slowly cooled. It is then passed *over* a fine screen to remove all broken grains and salt dust and then *through* a screen which is but slightly larger. Thus it is possible to produce a product which is practically uniform in size.

While pure sodium chloride does not attract moisture all commercial salt carries with it enough deliquescent salts to draw a certain amount of water from the air. Various moisture absorbents are used, among others, very small



Drilling holes in salt cliffs to bring about a gentle collapse.



amounts of cornstarch or of calcium phosphate. It is possible by the use of steel jacketed mixers to so combine calcium phosphate with commercial salt as to do away with any appearance of dustiness in the finished product.

The packing of salt into barrels or large sacks is still done largely by hand. In the case of smaller sacks and carton containers all packing is automatic. The accompanying illustration shows the rather elaborate machine, which automatically, by self-tripping scales, drops exactly the desired amount of salt into each container. The use of barrels for bulk salt is decreasing, cotton sacks being considered more desirable from many points of view. The choicest salt for domestic use is often sold in containers built up of two or more layers of cardboard interlined with asphaltum, a type of construction which renders them practically impervious to moisture. As the final cost of salt is largely dependent upon freightage charges and container expense, the argument in favor of sacks rather than barrels is undoubtedly sound. In the case of cartons for household use, the housewife must of necessity bear in mind that part of the money spent for salt is in reality spent for a container which shall be moisture-proof and which shall constitute a convenient dispenser.

Laboratory Control in Salt Refining

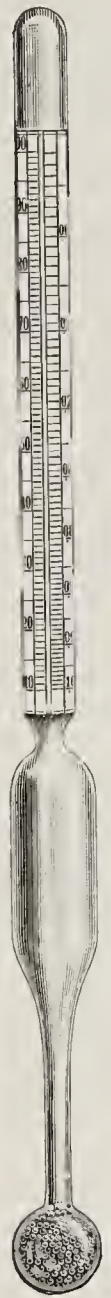
By H. V. CADWELL

The chemistry of brine is, for practical purposes, very simple. In most cases there is but one valuable constituent, the salt, and one greatly obnoxious ingredient, the gypsum or sulphate of lime. This impurity is always present, causing continual trouble and expense in the refining process. Calcium chloride and magnesium chloride are also always present but on account of their greater solubility they are held in solution until the salt is nearly all crystallized from the brine. By allowing the salt crystals to drain and then washing them with a little water these impurities are removed.

In order to separate the sulphate of calcium from the brine, the concentration of the brine must be carefully regulated. This regulation is conducted by the workmen with some form of the hydrometer. The ordinary hydrometer consists of a smooth transparent, circular glass tube of uniform cross-section, terminating in one or more bulbs, the lower one being filled with shot or mercury in order to keep the instrument steady with its axis in a vertical position when immersed in the liquid. The glass tube contains a paper scale, graduated according to some convenient system for comparing the densities of the liquids. In order to take a reading the hydrometer is placed in the liquid in which it sinks until the weight of the liquid displaced equals that of the hydrometer. The figures on the graduation at the surface of the liquid are then read. Special hydrometers for the salt industry have been devised which are called *Salimeters*. These have the graduation to which the hydrometer sinks in pure water marked 0 and the point to which it sinks in saturated brine at 52° Fahrenheit marked 100. The distance between the two marks is then divided into 100 equal parts. The *Beaume* hydrometer for heavy liquids is used to some extent. This scale has a second point established in addition to the 0 of pure water, which is the depth to which it sinks in a solution of 15 parts salt and 85 parts water. This point is marked 15 and the scale extended by adding the same size divisions beyond 15 as were used up to 15. The *Specific Gravity* scale is the most scientific and the least frequently used. In this system the depth the hydrometer sinks in water is marked "1" and the depth it sinks in a liquid twice as heavy as water is marked "2." The distance between the two marks is then divided equally, usually in 5/1000ths. The following table gives a comparison of the systems:

Salimeter, degrees.	Beaume, degrees.	Specific gravity.	Per cent of salt.	Salimeter, degrees.	Beaume, degrees.	Specific gravity.	Per cent of salt.
2.....	.52	1.003	.53	52.....	13.52	1.097	13.78
4.....	1.04	1.007	1.06	54.....	14.04	1.102	14.31
6.....	1.56	1.010	1.59	56.....	14.56	1.106	14.84
8.....	2.08	1.014	2.12	58.....	15.08	1.110	15.37
10.....	2.60	1.017	2.65	60.....	15.60	1.114	15.90
12.....	3.12	1.021	3.18	62.....	16.12	1.118	16.43
14.....	3.64	1.025	3.71	64.....	16.64	1.123	16.96
16.....	4.16	1.028	4.24	66.....	17.16	1.127	17.49
18.....	4.68	1.032	4.77	68.....	17.68	1.131	18.02
20.....	5.20	1.035	5.30	70.....	18.20	1.136	18.55
22.....	5.72	1.039	5.83	72.....	18.72	1.140	19.08
24.....	6.24	1.043	6.36	74.....	19.24	1.144	19.61
26.....	6.76	1.046	6.89	76.....	19.76	1.149	20.14
28.....	7.28	1.050	7.42	78.....	20.28	1.154	20.67
30.....	7.80	1.054	7.95	80.....	20.80	1.158	21.20
32.....	8.32	1.058	8.48	82.....	21.32	1.163	21.73
34.....	8.84	1.061	9.01	84.....	21.84	1.167	22.26
36.....	9.36	1.065	9.54	86.....	22.36	1.172	22.79
38.....	9.88	1.069	10.07	88.....	22.88	1.177	23.32
40.....	10.40	1.073	10.60	90.....	23.40	1.182	23.85
42.....	10.92	1.077	11.13	92.....	23.92	1.186	24.38
44.....	11.44	1.081	11.66	94.....	24.44	1.191	24.91
46.....	11.96	1.085	12.19	96.....	24.96	1.196	25.44
48.....	12.48	1.089	12.72	98.....	25.48	1.201	25.97
50.....	13.00	1.093	13.25	100.....	26.00	1.205	26.50

In the chemical laboratory it will be necessary to analyze the crude rock salt when mined to guide the miners in their operations. The brines will need to be analyzed in order to



tell when the precipitation of the gypsum is complete in the first part of the evaporation and again in the latter part to tell when the precipitation of the sodium chloride is complete. The purified salt must be analyzed from time to time in order that none of the impure article may reach the market. The following methods will be found suitable.

Test for Insoluble Matter.

After sampling well reduce the salt to a fine powder, and put into a glass-stoppered bottle. Weigh out 10 gms. of this powder and dissolve in a beaker by digestion with hot water and filter the solution into a 500 c.c. graduated flask. Wash the residue thoroughly, taking care that the residue contains insolubles only and not grains of the slowly soluble calcium sulphate. Fill the flask up to the mark with distilled water, mix well and set aside for later determinations. Ignite and weigh the insoluble residue. *This weight multiplied by 100 and divided by the weight of the sample (10 gms.) is the per cent of insoluble matter.*

Test for Calcium.

Remove 150 c.c. of the salt solution from the 500 c.c. flask with a pipette and add a small quantity of ammonium chloride and a slight excess of ammonium hydroxide. The solution should be clear at this point, if not, more ammonium chloride should have been added. A considerable excess of ammonium oxalate solution is now added and the solution allowed to stand for some time after which it is filtered and the residue washed well. The precipitate of calcium oxalate contains a slight amount of magnesium at this point and for a complete separation must be redissolved with hydrochloric acid made alkaline with ammonium hydroxide and reprecipitated with ammonium oxalate. The calcium oxalate precipitate is then dissolved from the filter paper with about 150 c.c. dilute sulphuric acid and the paper washed well. About 6 or 8 c.c. of strong sulphuric acid is then added and the solution warmed to 60° Centigrade and titrated with potassium permanganate solution to a slight pink color. The solution should be stirred during the titration. In order to obtain the percentage of calcium without calculation the potassium permanganate solution should be made up by dissolving 0.5254 gm. of chemically pure potassium permanganate in one liter of distilled water accurately measured. It is best to make up at least five liters of this solution and use an automatic burette if very much work is to be done. *Each 10 c.c. of this solution will be equal to 1% calcium with the above method.*

The potassium permanganate solution should be kept in a brown bottle or a bottle painted black. It is well to check the solution from time to time against a weighed sample of chemically pure sodium oxalate. Thirty cubic centimeters of the potassium permanganate solution will consume 0.03342 gms. of the sodium oxalate. It is easier to weigh a larger quantity of the salt and several checks should be made at a time, so it is best to dissolve 0.3342 gm. of sodium oxalate in 500 c.c. of distilled water and take several portions of 50 c.c. each. Titrate this with the permanganate solution after adding 5 or 6 c.c. of strong sulphuric acid and warming to 60° Centigrade. If the permanganate is found to be too weak it can be strengthened by adding a little of a stronger solution.

Test for Magnesium.

The combined filtrates from the calcium determination are acidified, evaporated to about 100 c.c., 30 c.c. of strong ammonia and 25 c.c. of a 10% solution of sodium arsenate added. This is best done in an Erlenmeyer flask so that the solution

may be vigorously shaken after the reagents have been added. The precipitate is filtered off, washed with the least possible amount of dilute ammonia, dissolved in 25 c.c. dilute sulphuric acid (1 to 4) into the original flask. The filter is washed with 50 c.c. hot water and 10 c.c. sulphuric acid (1 to 1) added. After cooling, 3 to 5 gms. of potassium iodide are added, the solution allowed to stand for five minutes, then the liberated iodine titrated with sodium thiosulphate solution to a faint straw color. A few cubic centimeters of starch solution is then added and the titration completed to colorlessness. The standard sodium thiosulphate solution should be made up of 6.7863 gm. of chemically pure sodium thiosulphate crystals ($\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$) per liter. *Ten cubic centimeters of this solution is equal to 1% magnesium.* Standardize this solution against 50 c.c. samples of a solution of 0.4942 gm. of chemically pure magnesium sulphate crystals in 500 c.c. of distilled water treated as for the analysis of magnesium. It should take exactly 30 c.c. of the standard sodium thiosulphate solution to titrate these samples. The starch indicator solution is made by mixing 1 gm. of starch to a paste in a little cold water and then gradually pouring this into 200 c.c. of boiling water. This solution should be boiled a little and put into a glass stoppered bottle with a few drops of chloroform when cool.

Test for Sulphate.

A sample of 100 c.c. of the original salt solution is transferred to a 250 c.c. beaker, made very slightly acid with hydrochloric acid, heated to boiling and an excess of barium chloride solution containing about 100 gms. of the salt per liter is added while rapidly stirring the solution. After allowing to stand a few moments the barium sulphate is filtered off on an ashless filter and washed well with water. The filter containing the precipitate is then placed in a weighed porcelain or platinum crucible and ignited. *This weight multiplied by the factor 0.82314 will give the per cent of SO_4 in the salt as determined in the above method.*

Other Impurities.

Potassium, bromine and iodine are present in rock salt and brines in very small quantities if present at all so there is no need, except in the rarest cases, to analyze the salt or brine for them. It is customary to regard the balance of the material as sodium chloride or common salt.

Equipment Necessary.

The equipment necessary for a laboratory in a plant engaged in the manufacture of salt is very simple. Aside from the work tables (which would be built at the plant) the following list will include the material necessary for running ten samples at a time:

1 Analytical balance sensitive to 1/10 mg.....	\$60.00
1 Set of analytical wts., 1 mg. to 50 gm.....	8.00
1 Graduated flask, 1,000 c.c.....	1.00
12 Graduated flasks, 500 c.c.	9.60
1 set of pipettes, 10, 25, 50, 100, 150 c.c.....	1.90
1 Graduated cylinder, 100 c.c. ....	.56
24 Beakers (Griffin form), 250 c.c.	2.16
2 Automatic burettes with reservoir, 50 c.c. in 1/10 c.c.	8.30
2 5-liter bottles	3.30
24 Watch glasses, 2½"	1.40
1 Dessicator, 6"	1.40
1 Dessicator plate for above	1.25
12 Porcelain crucibles No. 0	3.00
1 Crucible tongs, 9" steel .....	.22
1 Hot plate, gas, 14½"x18½"	10.00
1 Furnace, gas, for igniting precipitates	10.00
2 Ring stands, No. 2 (three rings).....	1.20
1 Drying oven, gas, 10"x12"x10"	10.20
2 pkgs. filters, ashless, 9 cm.....	2.16
12 Bunsen funnels, 2½"	3.12
1 Filter rack, 10 funnels	2.50
12 Erlenmeyer flasks, 250 c.c.	2.04
12 Stirring rods, 8" .....	.80
12 Glass stoppered bottles, 250 c.c.	1.50
2 Clay triangles, No. 2 .....	.10
2 Bunsen burners .....	.60
6 ft. rubber tubing, ¼" .....	.60
2 Wash bottles, 1,000 c.c. ....	.90
1 Water still	22.25
2 Wire gauze, 5"x5".....	.12
12 Wide mouth glass stopper bottles, 100 c.c.	1.33

Necessary Chemicals.

¼ lb. Potassium permanganate.....	1.10
¼ lb. Sodium oxalate.....	.35
2 lbs. Ammonium oxalate.....	3.00
8 lbs. Ammonium hydroxide.....	1.60
6 lbs. Hydrochloric acid.....	1.00
9 lbs. Sulphuric acid.....	1.50
1 lb. Ammonium chloride.....	.45
1 lb. Sodium arsenate.....	.90
1 lb. Potassium iodide.....	6.10
½ lb. Starch .....	.10
1 lb. Sodium thiosulphate.....	.32
¼ lb. Magnesium sulphate .....	.15
2 lbs. Barium chloride.....	1.10

All of the above, except the starch, should be chemically pure.

Civil Service and Politics.

It is admitted that most food officials are attached to their salaries. Yet it is fortunate for the food manufacturing industry that the connection of the majority of these officials with the public pay roll is a subsidiary consideration and is regarded as a means to the end. Their sincerity in the enforcement of laws and regulations is not to be questioned and they enjoy and maintain the most friendly relations and respect from conscientious producers. Occasionally, however, manufacturers are both amused and exasperated by the efforts of some incapable and uninformed official to conceal his inability by a campaign of press exploitation to win popular applause, and to impress appointive powers with the calamity which would follow his dismissal. While his erraticism inevitably leads to much confusion and insecurity for a time, his very efforts at publicity usually lead a discerning public to a true appreciation of values, and result in his own undoing. At any rate, such an administration can know no favorites and in actual harmfulness, is not comparable with that one, whose every action is guided by political expediency, and more especially the demands of "ring" politics. For the latter's acts are not subjected to public scrutiny and his subserviency to political machinations is unknown except to the initiated. There can be nothing more pathetic than to see a capable man handicapped by incompetent assistants, or the subordination of true potentiality to the whims and wishes

of petty partisanship, for, however cleverly it may be concealed or subtly exerted, it may be no less apparent.

You cannot see the pretty,
The gentle little mouse,
For the mouse is in the kitty
And the kitty's in the house.

It is unnecessary to warn producers that such conditions should be combatted wherever met, for it is only through the most careful selection of officials and through scrutiny of their qualifications that there can ultimately be brought about uniform and impartial administration of food and drug laws. At present, rigid civil service seems the most available remedy.

Along this line Kansas City civil service is undergoing some painful but seemingly necessary "it hurts me as badly as it does you" criticism by its hometown papers. In a recent examination held for the purpose of selecting food and sanitary inspectors, the examination board was impressed with a monotonous similarity of answers to questions submitted in the written examination. It has been intimated that possibly the list of questions had mysteriously found its way to the hands of applicants preceding the examination. The similarity of answers has been met with the explanation that quite a number of applicants had undergone a drilling by a "coach." However that may be, the first examination will go to the discard, and a new one in which extreme measures of supervision will be used, will be called for at an early date.

A Scientific Opinion Concerning Corn Syrup

Editor's Note.—When corn syrup first came into general use chemical analyses thereof seemed to indicate the presence of a certain constituent theretofore unknown to chemists. It was apparently a substance, or substances, with some of the qualities of both dextrin and maltose, but identical with neither. Its practical importance is due to the statement of those who claimed to have isolated it, that it is non-fermentable and that it is not acted upon by enzymes. It is interesting to note that exhaustive experimentation recently conducted by Wesener and Teller of Chicago have been productive of such results as warrant them in drawing the following conclusions:

Commercial glucose is a complex body of viscous consistency, running about 42 to 45 B \acute{e} . and containing from 80 to 85 per cent solids and 15 to 20 per cent water. It is nearly water-white and possesses a mild, sweet taste. The solids are composed almost wholly of sugars and dextrans, a minor portion consisting of a trace of mineral matter. The ash, present to the extent of mere traces, consists of mineral salts, including phosphates, sulfates, chlorides and carbonates, chiefly of sodium and lime. Tests for arsenic and other poisonous metals show these not to be present. Nitrogenous substances are present as a mere trace, chiefly as protein bodies, amounting to about 0.06 per cent.

It has been quite well established in the chemical literature that commercial glucose consists of dextrans and reducing sugars. Some authorities hold that the reducing bodies consist almost entirely of maltose, while others hold that they are a mixture of maltose and dextrose, together with some unknown unfermentable substance which has been called "gallisin" by some and "iso-maltose" by others.

In our work we have determined that the fermentable reducing sugars are a mixture of maltose and dextrose by calculations based upon their quantity as determined by reduction and upon the amount of gas developed by fermentation with yeast. The amount of gas thus produced is too large to allow the fermentable sugars as determined by reduction to be calculated wholly as dextrose and too small to allow their being calculated wholly as maltose. With different lots of glucose the relation of the maltose to the dextrose and the amounts of each will vary to some extent. Determinations on two samples show 11.7 and 17.2 per cent of dextrose and 22.9 and 16.4 per cent of maltose, respectively.

Further researches lead to the conclusion that at least three reducing bodies are normally present; namely, maltose, dextrose, and a third, which is less readily fermentable by ordinary bakers' yeast, but which may be made fermentable by the action of certain enzymes, especially those present in pancreatin, Taka-Diastase and malt, as well as by the hydrolytic action of dilute hydrochloric acid under the influence of heat. These difficultly fermentable reducing bodies amount to about 14 per cent of the total glucose when calculated as maltose, or 8 per cent when calculated as dextrose. The unfermentable carbohydrate residue remaining after removing the maltose and dextrose by fermentation consists of those bodies commonly recognized as dextrans. These, like the unfermentable reducing bodies, when subjected to hydrolytic action by diastase result in products which will under suitable conditions undergo almost complete alcoholic fermentation. When they are subjected to the hydrolytic action of hot dilute acid, applied either to the unfermented glucose or to the residue left after the glucose has undergone alcoholic fermentation, all of these bodies become wholly fermentable.

Cold water extract of malt as the source of the diastase was found less suited for the purpose than pancreatin or Taka-Diastase because of the larger proportion of unfermentable bodies which it contained and introduced into the products of fermentation.

It was found that a good quality of Taka-Diastase converted the unfermentable products into fermentable sugars, leaving only a very small amount of unfermented residue, which contained as reducing sugars less than 1 per cent of the glucose taken. In the most favorable instances the total unfermented residue amounted to from 4 to 5 per cent and included normal products of fermentation, notably succinic

acid and possibly some glycerine, which always results from the fermentation of sugars by yeast. The diastase present in good samples of pancreatin and in the cold water extract of malt in like manner converts the unfermentable residue of the glucose into fermentable sugars, but in some instances less completely than does Taka-Diastase.

In these experiments it was found that the kind of yeast used had a considerable influence upon the completeness of the fermentation of the products produced by the action of the several diastases.

Isolated ferments like pancreatin and Taka-Diastase lose their activity with age and when these weakened ferments act upon glucose the result of the decreased vitality is a decreased proportion of immediately fermentable sugars, with an increased proportion of the unconverted dextrans and of the intermediate unfermentable reducing carbohydrates or reducing dextrans. These conditions are also clearly apparent where weakened pancreatin or weakened Taka-Diastase or a limited amount of diastase acts upon starch of various kinds. The apparent results of such action are an extended row of products, including the well-recognized dextrans, unfermentable reducing bodies (apparently reducing dextrans) maltose and dextrose. The fact that the first bodies in this series are found to a limited extent only when there is a sufficient amount of the active diastase present, but are abundant when there is a limited amount present, indicates that they belong to a natural series of changes between starch and dextrose. The results of our examination of glucose and of the products of the combined action of diastase and yeast upon glucose, indicate that all the bodies of this series are normally present in glucose which is produced by the incomplete hydrolysis of starch by acids, just as they are present in liquors containing the products of the incomplete hydrolysis of starch by diastase, and that these bodies in glucose yield to further treatment with diastase, just as do those produced by diastase itself. From these facts, it is apparent that the claim for the presence in glucose of unfermentable reducing bodies as reversion products brought about by the action of the acids at a high heat is untenable.

A study of the action of hydrolytic agents and yeast on carbohydrates entering into common foodstuffs, such as potatoes, breakfast cereals, bread, and so forth, and upon pure starches, such as are found in these various food products, has been made in comparison with parallel experiments on glucose. In these experiments it was found that the carbohydrates of glucose agree closely in gas production with the carbohydrates of the more readily digestible foodstuffs, such as white bread, breakfast cereals and potatoes. It was also found that these several carbohydrates when acted upon by isolated ferments and yeast, as in the experiments conducted, yield variable but appreciable amounts of unfermentable carbohydrate products, just as the mashing of cooked starch with malt diastase in the making of malt liquors results in a liquor which after fermentation contains appreciable quantities of such unfermented and apparently unfermentable carbohydrate products.

The fact that commercial glucose, when it is treated with diastase and then subjected to yeast fermentation, is almost wholly converted into alcohol and carbon dioxide goes to prove that it consists of products that are wholly assimilable and, therefore, it furnishes a food to the body of a sugar nature. In this respect it is a more concentrated and at the same time a more readily assimilable food than are most of the carbohydrates belonging to the ordinary foodstuffs which first have to undergo cooking and then complete hydrolysis by the action of the digestive enzymes before they can be utilized by the body. In this respect glucose, pound for pound of dry weight, will furnish at least as much energy as does cane sugar.

J. A. WESENER.
G. L. TELLER.

CHICAGO.

A Contribution to the Knowledge of the Chemical Composition of Fruit Extracts.¹

BY E. H. S. BAILEY AND W. S. LONG.

This work was started with the view of obtaining data which would serve as an aid in the identification of commercial fruit extracts. This seemed desirable in view of the lack of data and of the consequent lack of definite standards for products of this class. It seemed necessary also, in view of the fact that samples of commercial fruit extracts were being sent to this laboratory with increasing frequency, with requests for information as to their purity.

It is hoped that this work will be of value as a slight contribution to our knowledge of the composition of fruit extracts and will assist in their identification. A method based on the separation and actual identification of the fruit ethers, if practical, would no doubt be more satisfactory. Some references to work having a bearing on the subject are as follows:

(1) "The Differentiation of Natural and Artificial Fruit Essences." (A. Landolt, Chem. Ztg. 35, 677-8.) A number of artificial fruit essences prepared in the laboratory and a number of natural fruit flavors prepared by macerating the fresh fruit with alcohol or sugar were compared. Determinations were made as follows: Specific gravity of the essence; specific gravity of the 80 per cent distillate; either content of distillate and volatile acids. Raspberry, strawberry and lemon flavors were examined. By this procedure Landolt was able to distinguish readily between natural and artificial essences.

(2) "The Difference Between Fruit Essences and Artificial Fruit Esters." (Werder, Schweiz. Wochshr. 49, 385-6.) This work consisted in the examination of a number of natural

essences and artificial substitutes by determining (a) the density of the essence, (b) density of distillate, (c) ester content, and (d) volatile acids. In artificial strawberry essence, valeric, butyric and acetic acids were found, while the natural essence contained propionic and acetic acids.

(3) "Composition of Fruit Juices for the year 1907." (Z. Nahr. Genussm. 15, 129-60.) This work covered the determinations of solids, ash and alkalinity of ash of a large number of samples of partially fermented fruit juices, including raspberry, strawberry and cherry.

(4) "Contributions to the Knowledge of Fruit Juices." (K. Windisch and P. Schmidt. Z. Nahr. Genussm. 17, 584.) An exhaustive discussion of the preparation, storage, and analysis of fruit juices. Tables are given showing the solids, ash and alkalinity of ash of various fruit juices.

(5) "Permanent Fruit Extracts." (Thoms. Ger. p. 285-304.) Extracts containing the aromatic substances and ferments unaltered are made by dialyzing in cold chambers and evaporating to desired density. On dialysis aromatic substances and ferments do not pass through the membrane while acids do pass through in part.

The tables following contain the data obtained upon fifteen samples of commercial fruit extracts, three commercial imitation fruit extracts, and twelve fruit extracts made in the laboratory. These laboratory-made extracts, with one exception, were prepared by macerating the whole fruit, finely ground, for a week or more with the extractive agent, then pressing out in cheesecloth and filtering through filter paper. In the case of one blackberry extract the dried fruit was treated with an equal weight of dilute alcohol for two weeks, pressed out and filtered as above.

The extractions were made with the following proportions of materials:

- (1) Strong alcohol, 50%; fruit, 50%.
- (2) Dilute alcohol, 50%; fruit, 50%.
- (3) Strong alcohol, 45%; glycerol, 10%; fruit, 45%.
- (4) Strong alcohol, 45%; sugar, 10%; fruit, 45%.
- (5) Water, 50%; fruit, 50%.

TABLE I.—COMMERCIAL FRUIT EXTRACTS.

No.	Alcohol, volume, per cent.	Grams per 100 cc.			Cc. N/10 acid per 100 cc.		Ash in solids, per cent.	Normal lead, No.
		Solids.	Ash.	Soluble ash.	Alkalinity, total ash.	Alkalinity, soluble ash.		
Pineapple								
1.	34.20	16.78	0.74	0.64	63.5	42.0	4.41	1.624
2.	27.60	14.37	0.58	0.43	70.2	38.2	4.04	1.526
3.	33.43	12.34	0.09	....	....	....	0.73	0.200
4.	35.90	16.56	0.73	....	....	....	4.41	1.740
5.	36.24	18.09	0.71	....	....	....	3.93	1.740
Strawberry.								
6.	33.95	8.64	1.00	0.88	73.5	51.0	11.57	1.885
7.	34.50	8.94	0.60	....	....	....	6.71	2.160
8.	45.20	1.17	0.36	0.31	20.3	6.8	3.08	.....
9.	32.20	7.17	0.59	0.47	79.6	51.1	8.23	1.881
Raspberry.								
10.	41.53	24.27	0.72	....	....	....	2.97	1.400
11.	30.60	21.37	0.44	0.33	55.5	30.0	2.06	1.437
12.	42.40	2.57	0.02	0.016	17.5	5.5	0.80	.....
13.	48.20	5.15	0.07	0.02	13.7	2.7	1.30	.....
14.	25.80	5.20	0.09	0.03	16.7	6.2	1.00	.....
15.	41.00	23.26	0.70	0.58	81.0	51.0	3.00	2.037
Cherry.								
16.	34.60	17.57	0.69	0.58	88.5	69.0	3.98	1.218
17.	29.00	8.09	0.35	0.25	53.5	35.5	4.32	.....
18.	37.23	17.72	0.64	....	....	....	3.61	1.220

Numbers 8, 12, and 13 were labeled as imitation extracts.

TABLE III.—VOLUME AND COLOR OF PRECIPITATES AND COLOR OF FILTRATE WITH PRECIPITATING REAGENTS.

The method used to obtain the results indicated in the table was as follows: Five cc. of the extract and 2 cc. of the reagent were placed in a Hortvet tube, thoroughly mixed and centrifuged for five minutes, and the volume and color of precipitate and color of supernatant liquid noted. Volume is expressed in cc.

Basic lead acetate (sp. gr. 1.25).			Normal Lead acetate (80 gms. per liter)			Alum and sodium carbonate (60%).		
	Vol.	Lake.	Filtrate.		Lake.	Filtrate.	Vol.	Lake.
Pineapple	3.5	Light cream..	Colorless ...	2.20	Light cream.	Colorless ...	0.80	White
Strawberry	3.3	Gray	Colorless ...	2.30	Flesh	Pink	0.60	Cream
Raspberry	5.3	Dark gray....	Colorless ...	3.50	Chocolate ...	Dark red....	0.30	Brown
Cherry	3.2	Light green...	Colorless ...	2.00	Gray blue...	Pink .....	....	Gray blue...
Blackberry	2.9	Green blue....	Colorless ...	2.40	Dark blue...	Purple	1.00	Blue

It will be noticed that as a class the extracts examined, eliminating from consideration the imitation products, possess, as might be expected, some characteristics in common, namely: An ash content of some magnitude, a larger proportion of soluble than of insoluble ash, an alkalinity of the soluble ash higher than that of the insoluble, a total alkalinity of from two to three times that of the insoluble ash, and a percentage of ash in total solids varying within rather narrow limits. As might be expected, these extracts differ but little in composition from the fruit juices themselves.

Considering the individuals of the class, it will be noticed that each gives a characteristically colored precipitate with lead acetate (normal or basic) and with alum. The pineapple, cherry, blackberry and raspberry extracts agree very closely in the percentage of ash in total solids, while the extracts of strawberry show much higher results in this respect. The use of sugar and glycerol in connection with alcohol as extractive agents changes very little the analytical properties of the extracts.

From the standpoint of flavoring property very little can be said in favor of these extracts. Experiments carried out under the direction of the head of the department of home economics of the University of Kansas revealed the fact that these extracts are practically worthless as flavoring agents for pastry products. These results were anticipated from the fact that, with the exception of the pineapple product, it is practically impossible to recognize the extracts through taste and smell.

STATE FOOD LABORATORY,
UNIVERSITY OF KANSAS.

July, 1916.

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The Chinese make an appetizing table sauce out of soy beans, wheat, and rock salt.

Sugar Beets and Beet Sugar, 1916.

Preliminary returns from practically all operating beet sugar factories in the United States indicate a production of 918,800 short tons of sugar during the current campaign. The area harvested amounted to 680,000 acres, and the beets 6,671,000 short tons. This is the largest acreage and tonnage of beets ever harvested in the United States, and the sugar production exceeds the highest preceding crop, that of 1915, by more than 44,600 tons.

During the past five years, the United States has consumed about 4,000,000 tons of sugar annually.

State and year.*	Factories in operation, No.	Sugar made, short tons.	Average extraction, † per cent.	Beets worked in factories.		Average farm price of beets per ton.
				Area harvested, acres.	Quantity worked, short tons.	
California:						
1916 (prelim.)...	11	243,800	16.9	144,200	1,439,000	\$6.44
1915	11	195,343	15.64	122,737	1,249,111	5.86
Colorado:						
1916 (prelim.)...	14	261,200	13.0	189,600	2,015,000	6.36
1915	14	273,780	14.49	171,222	1,888,860	5.88
Idaho:						
1916 (prelim.)...	5	54,100	12.7	45,100	427,000	5.78
1915	4	51,225	15.07	35,068	339,859	5.08
Michigan:						
1916 (prelim.)...	15	81,600	13.5	99,300	604,000	6.06
1915	15	129,997	13.03	122,000	997,972	5.91
Ohio:						
1916 (prelim.)...	4	22,500	12.3	24,600	183,000	6.50
1915	4	33,472	11.98	25,684	279,427	5.29
Utah:						
1916 (prelim.)...	11	116,400	12.4	72,700	941,000	5.67
1915	8	85,014	13.51	56,226	629,204	4.91
Other states:						
1916 (prelim.)...	14	139,200	12.7	104,500	1,062,000	6.07
1915	11	105,389	13.76	78,364	765,860	5.67
United States:						
1916 (prelim.)...	74	918,800	13.8	680,000	6,671,000	\$6.17
1915	67	874,220	14.21	611,301	6,150,293	5.67

*Acreage and production of beets are credited to the respective states in which the beets were made into sugar.

†Based upon the weight of the beets.

The Stock Show.

From a utilitarian standpoint the International Live Stock Exposition, which will this year be held from December 2 to 9, stands in the front rank of the world's educational institutions and no farmer or stockman can afford to stay away.

Not only is commercial live stock production profitable to an unprecedented degree, but the task of rehabilitating the industry must be vigorously prosecuted if the nation is to be assured of an adequate supply of meat.

Improvement of live stock is the need of the hour. As cost of production increases, breeders and feeders cannot achieve maximum results with the inferior and mediocre grades of cattle that constitute too large a percentage of the stuff now reaching market.

Calf Farm.

Baby calves are to be saved from slaughter in the State of Illinois. They will be rounded up by experts working under state supervision, taken to farms especially equipped for the purpose, and kept until old enough to become pets of boys and girls who are members of calf clubs.

A three-fold purpose will be accomplished by buying up the young calves. First, the public will be protected from the sale of immature veal; second, the dairy herds of the state will be increased; third, the way will be opened for the organization of many more calf clubs for children.

This plan, evolved by W. Scott Matthews, Illinois Dairy and Food Commissioner, is to be put into effect at once as a result of the moral and financial support pledged to him at a banquet held at the Great Northern Hotel in Chicago, November 1.

Grain Standards Regulations Issued.

Following public hearings held in a number of cities of the country, the Secretary of Agriculture, on Monday, November 6, prescribed and promulgated rules and regulations governing the administration of the United States grain standards Act, to become effective December 1, 1916. The regulations define terms, provide for the licensing of inspectors, appeals from inspectors' decisions, the reference and disposition of disputes as to grade, the taking of samples in appeals and disputes, the assessment of departmental fees and charges, the making of reports on shipments of uninspected grain, the holdings of hearings governing misgrading and misrepresentations as to grade, and other procedure under the Act.

The rules and regulations cover 49 pages of text, with the text of the Act appended. Copies may be had by grain dealers, millers, and other interested persons by application to the U. S. Department of Agriculture, Washington, D. C.

Foodstuffs Statistics.

The crop reporting board of the Bureau of Crop Estimates on November 1, makes the following estimates for the United States from reports of its correspondents and agents:

Crops.	Production (000 omitted).		Yield per acre.		Price Nov. 1.	
	1916.	Average, 1916-14.	1916.	10-yr. av.	1916.	1915.
Corn, bus.....	2,643,508	2,732,457	24.3	26.6	\$5.0	\$6.19
Wheat, bus.....	607,557	728,225	11.9	15.0	\$15.4	\$93.1
Oats, bus.....	1,229,182	1,157,961	30.3	30.0	\$49.0	\$34.9
Barley, bus.....	183,536	186,208	23.7	25.6	\$83.2	\$50.1
Rye, bus.....	41,884	37,568	15.3	16.4	\$115.2	\$85.7
Buckwheat, bus....	11,447	17,022	14.0	20.0	\$102.9	\$78.5
Potatoes, bus.....	288,964	360,772	79.6	97.5	\$135.7	\$60.8
Sweet potatoes, bus.	67,663	51,117	91.9	93.1	\$80.6	\$63.7
Rice, bus.....	33,160	24,378	37.6	33.1	....	....
Peaches, bus.....	36,911	43,752	....	....	*\$112.1	*\$85.2
Pears, bus.....	10,377	11,184	....	....	*\$96.9	*\$82.7
Apples, bbls.....	67,695	65,966	....	....	*\$2.60	*\$2.10
Kaffirs, bus.....	61,024	....	15.6	....	....	....
Cranberries, bbls....	413	....	17.5	....	....	....
Beans (5 states), bus.	9,924	....	10.6	....	*\$4.10	*\$2.89
Onions (14 states), bus.	11,060	....	325.0	....	*\$123.6	*\$82.9
Cabbage (8 states), tons	326	....	7.5	....	*\$2.09	*\$57.7

*Price Oct. 15.

Newly Elected Officers of the American Specialty Manufacturers' Association

President—William L. Sweet of the Rumford Chemical Works, Providence, R. I.

Vice-Presidents—R. R. Moore of the Diamond Crystal Salt Co., Eau Claire, Wis.; W. W. Frazier of the Franklin Sugar Refining Co., Philadelphia, Pa.; L. C. McDougall of Libby, McNeil & Libby, Chicago, Ill.

Treasurer—D. O. Everhard of the Ohio Match Co., New York.

Directors—Carl A. Lautz of Lautz Bros. & Co., Buffalo, N.Y.; Walter H. Lipe of the Beech-Nut Packing Co., Canajoharie, N.Y.; Charles T. Lee of the Kellogg Toasted Corn Flake Co., Battle Creek, Mich., and James M. Hills of Hills Bros. Co., New York.

Specialty Manufacturers' Convention.

The Eighth Annual Convention of the American Specialty Manufacturers' Association was held at the William Penn Hotel in Pittsburgh from the 14th to the 17th of this month. The earlier meetings of the session were given over to executive matters as was the final session in which the officers for the ensuing year were elected. There were many interesting talks. Mr. J. E. Linihan of the United Cereal Mills, Ltd., of Quincy, Ill., spoke of the immediate future in view of the constantly rising cost of food stuffs, bringing out the point that despite the advance in price of raw materials there had been but little rise in the price of commodities made by specialty manufacturers and adding that "*The problem confronting us to-day as a new year looms up before us is to keep our prices as low as possible to the consumer and to give to the distributors, the wholesaler and the retailer, their customary profit to which they are entitled. If the price goes up too high, the demand for the commodities, built up after years of labor, will be curtailed.*" Mr. Linihan urged the manufacturer to practice the most drastic sort of curtailment of unnecessary expenses.

Mr. Edward H. Hurley, chairman of the Federal Trade Commission, delivered an entertaining and instructive business address, the point he emphasized being the need for better business systems in American industries. A significant passage from his talk reads as follows: "*At home and abroad the best trained minds of our day are focused on the problems of economical production and distribution. Rule-of-thumb methods in cost making are forever obsolete, and cannot prevail against the precision of scientific accounting. The man or group of men with a hit-or-miss knowledge of their business will not survive in the commercial or industrial struggle. It is not the day of the man who knows 'about what it stands him' to do or to buy a certain thing. We are in the period of actual costs carried to the third or fourth decimal place.*"

Dr. Melvin T. Copeland, director of the Bureau of Business Research of Harvard University, urged education as the best means of meeting the new issues due to high prices and intensive competition. Mr. F. W. Fiske, educational director of the National Wholesale Grocers' Association, spoke on the subject of "Making Business a Profession," excerpts from which being given elsewhere in this issue.

Mr. John H. Schaefer of Davenport, Iowa, president of the National Association of Retail Grocers, brought to the Convention a message of cooperation and greeting from the retailers.

Friday was given over to a commemoration of the enactment of the Food and Drugs Act. Mr. Charles W. Dunn, counsel for the Association, is entitled to great credit for the

masterly way in which he handled this part of the program. So well chosen were the various subjects that in their entirety they constitute a veritable symposium on food legislation in this country. It is a source of regret that lack of space prohibits the reproduction of the many excellent talks in toto but elsewhere in this issue will be found Mr. Dunn's address in full and excerpts from the address of the Hon. George L. Flanders.

A full report of the convention, including all of the speeches, is to be found in the current issue of "The Retail Grocer." There were in attendance about 150 members and guests who took in the several entertainments afforded them by their Pittsburgh hosts and joined in the "singing contest" at the banquet on Thursday evening. The Hon. Martin G. Brumbaugh, Governor of Pennsylvania, and Col. H. P. Bope, general sales manager of the Carnegie Steel Company, were among the speakers at the banquet.

Coffee Roasters' Convention.

The National Coffee Roasters' Association held their annual convention at the Marlborough-Blenheim Hotel in Atlantic City on November 14, 15, 16 and 17th. One of the subjects discussed was the perfecting of plans for the expenditure of \$200,000 in national advertising designed to bring coffee back to the status of former years before the public heard so often that "*There is a reason*" why one should not drink that cheering beverage. Significant quotations are the following, from the address of Ross W. Wier, president of the Association:

"We believe the time has come for coffee producers to stand up for a much maligned article of food. This industry represents an investment of more than \$100,000,000 and it cannot afford longer to remain silent, particularly under attacks based upon false premises. We shall have nothing to say as to the so-called 'substitutes,' but we do propose to push coffee to the front and increase consumption in every way possible."

and the following, from the remarks of Charles H. Bain of San Francisco:

"A great mistake has been made in laying emphasis upon tannin in much of the coffee literature which has been sent out and giving the public to believe that scientific treatment of the bean is necessary to procure a wholesome beverage. We find no such policies on the part of the producers of cocoa, which is coffee's natural rival. When we have anything to say to the public let us say it henceforth in the plain English, so that the public mind will be made friendly toward coffee. When we advertise coffee we should extol its merits and forget its faults, if it has any."

That a difference of opinion as to the question of what to say about coffee exists among its friends is shown by the following quotation from the remarks of F. J. Ach of Dayton:

"The presence of tannin in coffee is well known to the public, and it is accordingly the duty of this association to inform the public how the harmful qualities of tannin may be reduced to a minimum by the most approved treatment. We know that much of the fight against coffee has been based upon the admitted fact that coffee does contain qualities which may be harmful of themselves, and the remedy is to educate the public to the proper making of coffee just as the public has been educated to the use of bleached flour. The opposition has had the support of many physicians, and if we can convince them by frankness that the harmful qualities in coffee may be so treated as to make them quite harmless, then we shall be doing both ourselves and the public a service."

Edward Aborn of New York adding:

"Much of the trade we have lost may be reclaimed through widespread advertising of correct coffee brewing. Thousands of housewives even now do not know that coffee never should be boiled. Thousands of teachers in domestic science courses know little or anything about coffee and are discouraging its use."

Among the speakers were Edward N. Hurley, chairman of the Federal Trade Commission; Dr. Carl L. Alsberg, chief of the Bureau of Chemistry; C. C. Parlin, of the Curtis Publishing Company, Philadelphia, who has made a study of

coffee production and advertising; John H. Schaefer, president of the National Retail Grocers' Association, which is to be enlisted in the coffee booming movement; William Bayne, Jr., president of the Coffee Exchange, New York, Secretary A. H. Beckmann, of the National Wholesale Grocers' Association, and L. J. Burnes, of the National City Bank, New York.

That the present widespread agitation for prohibition was not overlooked is shown by the remarks of R. W. McCreery of Marshalltown, Iowa:

"This is the time for the wholesale grocer and the retailer of coffee to get together and put booze out of business by offering wholesome coffee as a substitute. Twenty-four States have gone dry and if we think right we are glad of it. We can help this righteous war upon a common enemy and put the mail order house out of business so far as we are concerned by persuading the retail grocer to wake up and take advantage of the new opportunities the sweep of prohibition is bringing him."

That coffee is being handled in law-abiding fashion is proven by the fact that the Association's committee on pure food reported that "Nothing whatever had been reported to the committee during the past year."

The New Officers of the National Coffee Roasters' Association

President.....Frank R. Seelye, Chicago, Ill.
1st Vice President...Benj. C. Casamas, New Orleans, La.
2nd Vice Pres.....J. M. McFadden, Dubuque, Iowa
Treasurer.....M. H. Gasser, Toledo, Ohio
Board of Directors..J. O. Cheek, Nashville, Tenn.
Edward Aborn, New York City, N. Y.
C. H. Bain, San Francisco, Cal.
R. W. McCreery, Marshalltown, Iowa

What the Women Buy.

Attention is called to the results of a recent investigation in the retail grocery trade in New York City by Raymond B. Callahan, M. C. S. Mr. Callahan's work is recorded in a pamphlet issued by the National Trade Association. The facts disclosed by the investigation are interesting in showing the relative importance of the various factors in retail competition.

To obtain the consumer's point of view a sheet of eight questions was mailed to a selected list of 400 married women living in Greater New York. The questions were accompanied by a circular letter requesting the women to write their answers on the sheet containing the questions and to return the sheet. The list of women was selected with the purpose of obtaining the opinions of women of fair intelligence and moderate means. In this way thoughtful answers were received and the opinions were not unduly influenced by the stress of meager financial resources, or by the indifference of the wealthy to whom price would be a matter of small consideration. One hundred and forty-one answers were received in reply to the 400 letters mailed. The questions and the results of the answers received were as follows:

1. When you go to a grocery store and find two articles of similar nature for sale at the same price, one of which is a nationally advertised article and the other an unadvertised article, which article do you purchase?

Answers: 87.6% "the advertised"; 3.6% "the unadvertised"; 8.8% noncommittal.

2. When you find two articles of similar nature for sale at different prices, the unadvertised article being priced lower than the advertised article, which do you buy?

Answers: 60.6% "the advertised"; 24.2% "the unadvertised"; 15.2% noncommittal.

3. Are you more inclined to purchase an advertised article when the retail price thereof is stated in the advertisement than when no price is stated?

Answers: 71.2% "yes"; 26.5% "no"; 2.3% noncommittal.

4. Do you find that advertised articles are better quality as a general rule than unadvertised articles selling at the same price?

Answers: 66.2% "yes"; 26.8% "no"; 7.0% noncommittal.

5. When some nationally advertised article which you use is advertised by the manufacturers as being on sale in retail stores at a certain price, and some grocery or department store offers the article for sale at less than the advertised price:

(a) Does it lower your estimation of the value of the article?

(b) Do you continue to purchase the article at the place where you have been purchasing it, or do you go and purchase it at the store which offers the article at less than the standard price?

(c) Does the cut in price cause you to increase your consumption of the article?

(d) If later the cut price is raised back to the standard price, do you stop using the article and use another brand in its place?

Answers: (a) 3.7% "yes"; 96.3% "no."

(b) 29.9% continue to buy at regular place; 67.9% patronize the "cut rate" store; 2.2% noncommittal.

(c) 36.3% "yes"; 60.7% "no"; 3.0% noncommittal.

(d) 8.3% "yes"; 89.5% "no"; 2.2% noncommittal.

6. Do you find that stores which sell nationally advertised articles at less than the advertised price also sell other articles cheaper than the stores which do not cut the prices on advertised articles?

Answers: 47.0% "yes"; 44.8% "no"; 8.2% noncommittal.

7. At what class of grocery stores, as classified below, do you purchase most of your groceries?

(a) Small grocery store in your neighborhood?

(b) Large retail grocery store?

(c) Chain grocery store?

(d) Department store?

Answers: 12.6% scatter their purchases among the four classes of stores; 87.4% purchase most of their groceries at one class of stores.

The 87.4% of the women who have a regular purchasing place report that they purchase most of theirs as follows:

50.3% small neighborhood stores; 28.0% large retail grocery stores; 16.1% chain stores; 5.6% department stores.

8. Do you believe that the manufacturers of articles which they put out under a trade name should be empowered by law to designate the price which the retailer must charge you for the article?

Answers: 25% "yes"; 72% "no"; 3% noncommittal.

The reasons given by those opposed to price maintenance were briefly as follows:

1. The manufacturer should have no interest in the retail price as long as he receives the full wholesale price.

2. The law should not interfere.

3. The consumer should not be deprived of the benefit of any saving which may be made possible by more efficient merchandising by the retailer.

4. It is unfair that stores operating on a low overhead cost should earn a larger profit than the store operated under less favorable but no less efficient conditions.

The reasons given in support of price maintenance were:

1. Price maintenance would eliminate the practice of cutting prices of well known articles in order to attract trade and then making up the loss by charging higher prices for articles not so well known.

2. The practice of charging more for an article than it is worth would be prevented.

3. The housewife would be able to more accurately fix the household budget.

4. The manufacturer would be enabled to keep up the quality of his product and to guarantee that quality.

With the Wholesale Grocers

Excerpts from an address delivered on November 15th at the Sixth Annual Convention of the National Coffee Roasters' Association, Marlborough-Blenheim, Atlantic City, N. J., by Alfred H. Beckmann, Secretary, National Wholesale Grocers' Association of the United States:

* * * One of the most important fields of Association endeavor is the legislative. We all know that the average legislator does not possess, and in the nature of things cannot possess, the necessary knowledge and experience properly to formulate and enact laws relating to many hundreds of different subjects and involving, in many cases, the interpretation of prior enactments and amendments to those enactments. Outside help is needed and I believe that in most, if not all cases, it is welcomed by the legislator. It is to a merchant's own interest, as well as a civic duty, to become interested in pending legislation and freely to give of his special knowledge and experience in order that the statutes may be so drawn that there will be no costly uncertainty as to their application and effect and that they may be just and fair alike to the manufacturer, distributor and consumer.

I am convinced, from my own experience in Association work, that if merchants are alive to what is going on in the various legislatures they may successfully influence, by reasonable arguments, proposed statutes that directly affect them and their business. I have had occasion to witness the introduction of bills that, if enacted in their original form, would have caused very serious results and needlessly so. I have witnessed occasions where provisions in a pending bill, although apparently reasonable and necessary, have been amended or refused passage when arguments have been advanced showing in a practical way what the actual effects of the bill would be if enacted.

I therefore cannot too strongly urge upon you the advisability of taking an active interest in proposed legislation that in any way affects your business or the business of your customers.

It is indeed surprising what a vast number of bills are introduced in the various legislatures each year. This is especially true in the odd numbered years when more than forty state legislatures are in session. In some years, our counsel, in behalf of the Pure Food and Legislative Committee, are called upon to examine from seventy-five to one hundred thousand bills introduced in Congress and the state legislatures. As a rule a surprisingly large percentage of such bills are found to affect members of our Association, either directly or indirectly.

During the legislative sessions of last spring an unusually large number of prohibition bills were introduced, particularly in the Southern states. The provisions of many of those bills, if enacted in the form in which they were introduced, would have either prohibited or seriously affected the sale of such products as flavoring extracts and other legitimate food products necessarily containing more or less alcohol.

In Maryland and Virginia the legislatures this year adopted the national weight and measure branding requirement and now there are twenty-eight states that have followed the provision of the national law on this subject. We understand that you, like ourselves, favor this law.

The growing tendency toward uniformity in the commercial laws of the various states is decidedly encouraging. Through the efforts of members of our Association and others in the trade, the food laws of a large majority of the states are now substantially uniform with the national law, the Food and Drugs Act of June 30, 1906, and in my opinion the day is not far distant when, through the efforts of the various trade associations, all state laws of a commercial character, directly or indirectly affecting interstate shipments, will have become practically uniform. * * *

* * * Your Association is confronted with educational problems in enlightening the consuming public that coffee

is *not* injurious. I prophesy your success, notwithstanding "*There's a reason*" advanced to the contrary. Any food or drink is injurious if indulged in to excess. * * *

* * * I note that you are particularly interested in honest advertising. We have a special committee on that subject and are devoting our efforts to the elimination of false advertising, and the correction of many present evils. One of the conclusions that I formed as a result of an investigation of this matter is that false advertising laws in the various states, however rigorous such laws may be, will never be of any practical avail until local advertising clubs and national organizations like yours and our own create a strong public demand for the enforcement of these laws, a demand that will compel prosecuting attorneys in the various counties of our several states to enforce the existing statutes. *No one pretends to deny that false advertising is prevalent and that by this means consumers are defrauded of vast sums every year. But is there a man in this room who can tell me of a single case that a public attorney, acting for a municipality or state, has prosecuted to a conclusion against either a manufacturer or merchant guilty of false advertising or against a publication that has accepted such advertisement?* We ourselves are partially at fault for not insisting upon action by our public servants.

In concluding I desire to impress upon you the fact that the "pull-together" spirit must prevail if any organization is to achieve the objects for which it was formed. Each and every member should consider himself a committee of one to see to it that the objects and purposes are carried out. In other words, each member should take a personal interest in the Association's affairs and be able to feel that the results accomplished by the Association have been in part due to his earnest efforts. Co-operation is the watchword, and judging from your wonderful growth and achievements in the comparatively short time your Association has existed, I cannot help but think that some such watchword has been in your minds throughout your activities.

Making Business a Profession.

Excerpts from an address before the annual convention of the American Specialty Manufacturers' Association by F. W. Fiske, Educational Director of the National Wholesale Grocers' Association of the United States.

In the past the lawyer, the physician and the clergyman were thought to be the only ones who really needed more than common or high school education. From this common conception of the needs of education the designation of professional men came about. This charmed trio of professional men were expected to minister to all human ills, mental, physical and moral. Later on, as the sciences were developed for the use of industry, the engineer was conceded to be entitled to the rank of a professional man, and now we find several classes knocking at the door of this select circle. The accountant is clamoring for admittance; the sales manager, the salesman, the advertising man and the credit man are not far behind, and some of these are even claiming that they *have* attained the rank they seek. But no one has ever heard anything about giving the manufacturer, the wholesale grocer, and numerous other necessary and important parts of the wheels of business the honor of being professional men. It is not that their importance is less, but, I believe, because their work has been thought to be less scientific, and because few careful and systematic efforts have been made to make it so.

The business man has depended too much on his own experience and his own individual effort to solve his problems, but the time has come when he must depend, not only on his own experience, but upon that of others if he is to succeed against the onslaught of the ever-increasing keenness of competition.

Herbert Spencer said: "To prepare us for complete liv-

ing is the function which education has to discharge." As a large part of our lives are devoted to business, it follows that education is as necessary to the business man as to the lawyer, the doctor and the preacher, if we are to make the most of life and get the most out of our work. But this education must be practical, and it must be adapted for ready use. To provide such education for the grocery trade is the function which the educational bureau of the National Wholesale Grocers' Association is expected to discharge.

Our educational work is not intended for the wholesaler alone, but it is for the benefit also of the retailer, the consumer, and I trust I am not presumptuous in saying, for the benefit of the manufacturer, too. In the future, when our conference committees meet, the wholesale grocers will come with the facts. If the manufacturers inquire of us whether the margin they are allowing us on their products is a reasonable return for the important service of distribution, we shall be in a position to answer them with very exact and positive facts.

Believing that education, as well as charity, should commence at home, our first educational committee is known as the Committee on the *Education of the Jobber*. We wish first to look to ourselves before we can expect to extend the sphere of our educational influence to others. The initial step in the education of the jobber has been to establish an information bureau to which any member of our association may look for information regarding the grocery business and its allied interests. Many jobbers are often confronted with perplexing problems of fact. They are frequently in need of information which may not be readily available or which they may be too busy to secure for themselves. It is one of the functions of the educational bureau to provide such information, and at the same time make available, through our monthly Bulletin, timely data which will keep each member informed on matters of current interest.

Efforts will be made, through educational matter, to raise the standards of salesmanship, to improve accounting procedure, to suggest profitable methods of advertising, to foster the objects of our Association, and to encourage and uphold the work of our committees. The interest and co-operation of other educational agencies have been secured and our members are already realizing the advantages and benefits secured through a central organization of this kind.

Another committee has for its duties the encouragement of *co-operation with the retail grocer*. The National Association of Retail Grocers has already officially expressed its approval of the proposed efforts of our Association along educational lines for the benefit of the retailer. The success of the independent retail grocer is menaced in many ways by chain stores, mail order houses, trading stamps, and not infrequently by the retail grocer's ignorance of his own business. Somebody said that the majority of failures of retail dealers in all lines is because of their absolute ignorance of their business. The ignorant dealer hurts the man who knows his business, and the more a man knows of his business the surer he is of success. That the retail grocer is entirely at fault is untrue. Many things over which he may have little control may cause some of the present conditions. The various institutions which compete with independent retail grocers for the grocery trade of the country are the result of a public demand, whether natural or artificial I shall not presume to say. To assure the success of the retail grocer this demand must be met either by adopting the methods of the chain store or the mail order house; or by creating other demands which can be met on a fair and businesslike basis. It is the function of our educational work to point out to the retail grocer the advantages he possesses, and to show him fair methods of attracting profitable business which might otherwise be lost. Much can be done through the jobbers' and manufacturers' salesmen. Attractive, forceful leaflets, giving the benefits of timely studies, and of useful hints for the improvement of their business will be distributed among the retail grocers.

The National Wholesale Grocers' Association believes that the retailer, the jobber and the manufacturer have a mutual

interest at stake and our educational facilities will be used for the common cause.

I have already referred to some of the work of our *Cost Research and Statistical Committee* when I mentioned our System of Operating Accounts for Wholesale Grocers. This committee is devoting its time to the accounting, and more strictly financial operations of the wholesale grocery business. Various items of cost will be studied with the purpose of suggesting methods of economy and of avoiding unnecessary expense and waste. We believe our System of Operating Accounts to be the most complete work of its kind ever issued. All our members are being urged, in setting up their books, to adopt this uniform system of accounting, which is adapted to the needs of both large and small jobbers. Following the adoption of this system, it is our purpose to study carefully the influence of the many different conditions of doing business. We wish to know how the geographical location, density of population and many other factors affect the cost of doing business. We believe that the adoption of this system will help the wholesale grocer and, in turn, the manufacturer:

First—By providing an exact statement of the cost of doing business, without an accurate knowledge of which he cannot be sure of his success;

Second—By providing figures which should enable him to obtain the banking credit to which he is entitled;

Third—By assisting him to obtain a correct and reasonable return on his investment;

Fourth—By encouraging economy and efficient management.

Intensive studies of such important and timely topics as pickup and delivery service, packing room costs, the application of our proposed Profit and Loss Statement to the various departments, returned goods, dropped shipments, the relation of volume to cost, and the remuneration of salesmen are already under way.

Another committee is to initiate the preparation of a *Food Encyclopedia*, a work which will, when complete, include full information regarding the production, manufacture, packing, marketing and sale of all food products. Realizing the size of this undertaking, it is planned to issue separate booklets, each to contain complete information in regard to a single commodity. We believe that wide distribution of these booklets, which will also contain practical standards of grading, the governmental regulations surrounding distribution, and other useful facts will be of great value to the jobber, to his salesmen, and to the retailer, and at the same time, be of material benefit to the producer or manufacturer. The booklets should prove helpful in creating a demand for various articles and in making intelligent their purchase and sale.

Our *Food Geography* Committee, another branch of our educational work, has almost completed, in co-operation with a prominent writer, the preparation of a food geography, a work of almost 100,000 words which will accurately portray the geographical aspects of the production of the world's food supply. This work will soon be published and it is expected that it will be introduced in the schools of the country as a standard text book.

Honest advertising has been considered of sufficient importance by our Association to warrant the appointment of a committee whose efforts will be devoted to urging the enactment and enforcement of laws forbidding dishonest advertisements and other unscrupulous methods of attracting trade.

Another subject to which our Association is giving much attention is the *Metric System of Weights and Measures*. Under the leadership of Major Drake of Easton, Pa., one of our prominent members, we were the first trade association to urge the universal adoption of the metric system. We secured the compilation of the metric equivalents for canned foods and have recommended that they be included on the labels of all such goods. It is needless to call your attention to the necessity of using the metric system if you want to participate in the trade with South America and with other foreign countries.

Recent Patents

The following patents of interest to readers of this journal recently were issued from the United States Patent Office. Copies thereof may be obtained from R. E. Burnham, patent and trade-mark attorney, 882 Bond Building, Washington, D. C., at the rate of 20 cents each. State number of patent and name of inventor when ordering.

1,202,130. Powdered milk product. Samuel A. Vasey, London, England.

1,202,146. Apparatus for manufacturing chocolate sweetmeats and other confectionery. Wenzel Balcar, Gyor, Austria-Hungary, assignor to National Equipment Co., Springfield, Mass.

1,202,247. Method and apparatus for feeding batter to a baking-machine. Werd W. Turnbull, Columbus, Ohio, assignor to The Turnbull Mfg. Co., same place.

1,202,350. Molding or shaping dough. George S. and George R. Baker, London, England.

1,202,508. Food product. George S. Gordon, New York, N. Y., assignor to Gordon Wolf Cowen Co.

1,202,574. Fruit sorting or grading apparatus. George D. Parker, Riverside, Cal.

1,202,627. Machine for cutting and eviscerating fish. Frederick C. Weber, Bethesda, Md., and Frank M. Allen, Washington, D. C. (Dedicated to the public.)

1,203,082. Cut-off for dough-hoppers and the like. Frank H. Van Houten, Beacon, N. Y., assignor to Dutchess Tool Co., same place.

1,203,108. Baking-machine. Orlando Garrison, Dayton, Ohio, assignor to The Turnbull Mfg. Co., Wilmington, Ohio.

1,203,122. Automatic take-up for chain baking-machines. James W. Lawhead, Wilmington, Ohio, assignor to The Turnbull Mfg. Co., same place.

1,203,174. Process for treating cereal products. Thomas G. Blacklock, New York, N. Y., assignor to Blacklock Milling Co.

1,203,175. Apparatus for treating cereal products. Thomas G. Blacklock, New York, N. Y., assignor to Blacklock Milling Co.

1,203,176. Process for making dough. Thomas G. Blacklock, New York, N. Y., assignor to Blacklock Milling Co.

1,203,203. Pineapple-crate. Henry B. Kopf, New Haven, Conn.

1,203,361. Manufacture of bread. Henry A. Kohman, Charles Hoffman, and Truman M. Godfrey, Pittsburgh, Pa., assignors to Ward Baking Co., New York, N. Y.

1,203,594. Color concentrate for edible fats (butter-coloring composition). Carleton Ellis, Montclair, N. J.

1,203,705. Dough-trough. Corry B. Comstock, New York, N. Y., assignor to Ward Bread Co.

1,203,734. Dough-punching machine. Ernest & Herman Heidland, St. Louis, Mo.

1,203,875. Food-preserving container. John G. Dodgson, Maywood, Ill., assignor to American Can Co., New York, N. Y.

1,203,905. Shortening composition. Robert T. Paessler, Wilkes-Barre, Pa.

1,203,983. Powdered-egg product and process of making the same. George C. Conant, New York, N. Y., assignor of one-half to Josiah Decker, Jr., Montclair, N. J.

1,204,032. Manufacture of beverage extracts. John L. Kellogg, Battle Creek, Mich., assignor to Kellogg Toasted Corn Flake Co., same place.

1,204,175. Machine for pitting fruit. William M. Mamel, Sr., New York, N. Y., assignor to Garrett E. Haring, same place.

1,204,280. Manufacture of bread. Henry A. Kohman, Truman M. Godfrey, and Lauren Ashe, Pittsburgh, Pa., assignor to Ward Baking Co., New York, N. Y.

1,204,281. Leavened bread. Henry A. Kohman, Truman M. Godfrey, and Lauren Ashe, Pittsburgh, Pa.

1,204,315. Process of making practically alcohol-free beers. Caspar Reiter, Bayrischzell-Hochkreut, Germany.

1,204,358. Manufacture of beverage extracts. John L. Kellogg, Battle Creek, Mich., assignor to Kellogg Toasted Corn Flake Co., same place.

1,204,413. Paring-machine. Berton C. Koons, Rochester, N. Y.

1,204,617. Method of recovering sugar from masse-cuite. Henry A. Vallez, Bay City, Mich.

1,204,671. Dough-product-cutting machine. Edward E. Lawrence, Jamaica, N. Y., assignor to Loose-Wiles Biscuit Co., Long Island City, N. Y.

1,204,685. Fruit grader and packing bench. Harry J. Phillips, Grand Junction, Colo.

1,204,812. Sausage-casing and method of producing same. Bernard J. Mumm, St. Paul, Minn.

1,204,869. Process of manufacturing unfermented beverages. Herman Heuser, Chicago, Ill.

1,204,880. Process of preserving fruit-juices. Carl A. Kern, Mill Valley, Cal.

1,204,881. Fruit-juice product. Carl A. Kern, Mill Valley, Cal.

1,205,110. Process for peeling fruit. William J. Schaefer, Ontario, Cal.

1,205,117. Machine for washing fruit. George T. Stamm, Upland, Cal.

1,205,118. Fruit-washing machine. Fred Stebler, Riverside, Cal.

1,205,119. Fruit-washing machine. Fred Stebler, Riverside, Cal.

Staff Correspondence

Idaho.

Careless or wilful pollution of potable water in this state has resulted in a plan of co-operation between the Idaho Food Department and the United States Bureau of Forestry whereby rangers connected with that Bureau will become deputies of the state Food and Sanitary Department.

The legislature-elect of Idaho, which convenes Jan. 8th, will be given an opportunity to study the pollution question and pass legislation to remedy it as a stringent bill is now being prepared by the state Board of Health.

"The attention of the people of this state," recently said Commissioner J. K. White, "is called to the fact that federal inspection has been installed by the Boise Butcher Company and the Boise Valley Packing Company of Boise. This part of the state has never before had federal inspection of meats.

"The people of Boise should take an interest in the matter, and I would be pleased to have them go to the plants and see how their meat products are handled and prepared. Ordinarily when people think of a slaughter house they recall the ordinary country killing pen with all its filth, corruption, foul odors, flies and dirty butchers. That is not true today in our government inspected plants. There are no flies, no filth, and no dirty butchers. These places are so clean that the most refined lady can visit every part of the plants and be escorted by the butchers dressed in clothes as clean as those worn by the trained nurse in your doctor's office."

"Visit the meat market," continued Commissioner White in his advice to the people of Idaho. "Go in the ice box. Look at the hands and finger nails of the man who cuts and wraps your meat. Examine the block on which the meat is cut. Look at the floor and see if it is covered with grease and scraps of meat. Look at the walls, ceilings and light globes for cob webs, flies or fly specks. Compare the inspected shops with other places and with the man who peddles meat at your back door and then use your own judgment as to where you want to buy your family's meat supply."

"The vast intermountain country, including Idaho, Utah, Nevada, eastern Washington, Oregon and part of Montana, is to be made a free bovine tuberculosis district," State Veterinarian H. G. Bodle recently announced. "It will be the greatest boon to the cattle industry in the history of the intermountain country. It also means better meats for consumption."

For the purpose of working out co-operative plans, Dr. Bodle went to Chicago to attend the United States Livestock Sanitary Association's twentieth annual meeting, Dec. 5 and 6. Dr. Murray, chief inspector in charge of the northwest district of the Bureau of Animal Industry with headquarters at Salt Lake, also went to Chicago. They held a conference with other officials connected with the Bureau of Animal Industry, which will aid Idaho in its attempt to stamp out the dread white plague among cattle.

"There is some tuberculosis among our cattle," said Veterinarian Bodle. "However, there is nothing like the percentage found in middle western and eastern states. This is due to our excellent climatic conditions and to the fact we have less moisture and a greater altitude. Under the plan of co-operation to make the intermountain country a 'free' district, tuberculosis will be eradicated and cattle can then go from this territory with a clean bill of health. Barriers will be raised to the importation of diseased cattle. In fact practically every instance of tuberculosis known in this territory among cattle has been traced back to stock that has been imported to the intermountain country. The war against tuberculosis in cattle will also be waged from this territory by the Bureau of Animal Industry through other states."

In order that owners of stock may be reimbursed for the cattle condemned in the clean-up campaign Veterinarian Bodle said that bills would be introduced at the next session of the Idaho legislature, the purpose of which will be to allow owners two-thirds of the value of the cattle.

Within a comparatively short time three cases of *tuberculosis in hogs* have been called to the attention of State Veterinarian Bodle. Prompt action will be taken to eradicate the disease.

Indiana.

Advance copies of the annual report from the office of Dr. H. E. Barnard, State Food and Drug Commissioner, show in detail the work of his departments for the year ending September 30th.

During the year 1,408 samples of food were sent to the laboratory by the inspectors and analyzed. Of this number 1,123 were listed as legal and 265 or 20.2 per cent illegal. The large number of illegal samples is due to the fact that special attention was given to the products of the farmer and the small retailer who manufactured his own goods.

Fourteen out of 25 samples of cider were found to be illegal, in nearly every case because of the presence of an excessive quantity of alcohol.

Twenty-one of 44 samples of vinegar were illegal, usually because the acidity was low. The illegal vinegars were usually farmer's products and were sold before they were sufficiently matured.

Thirty-seven of 160 samples of hamburger steak were preserved with sulphites or adulterated with starch. Thirty-five of 183 samples of sausage contained starch.

Thirteen of 104 butter samples were high in moisture content.

Twenty-nine of 129 ice cream samples were low in butterfat, and 71 out of 448 samples of milk were adulterated, 10 with the addition of water, 11 because much visible dirt was present, and 8 because they were sub-standard either in fat or total solids.

Omitting from the totals the milks, ciders and sausages which will always be adulterated in spite of food laws and inspectors, the figures show the food supply to be in an excellent condition from the chemist's standpoint. Not a single sample of packaged goods, tinned products, extracts, spices, breakfast foods, etc., was adulterated.

Three hundred and sixty-seven samples of drugs, including the common preparations such as aspirin, quinine and spirits of camphor, cough syrups and disinfectants, showed a percentage of adulteration of 9.8 per cent. Fourteen samples of aspirin proved to be fraudulent. The samples were purchased by druggists from grip sack peddlers at a time when aspirin was very high.

Of the 27 linseed oil samples analyzed, 12 proved to be mixed with mineral oil.

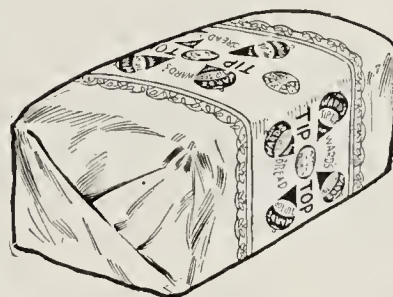
Most of the miscellaneous products including patent med-

"QUALITY, Purity and Cleanliness" is a business slogan standing for three food manufacturing virtues which are the inspiration back of the making of every loaf of

WARD'S TIP-TOP BREAD

Quality and purity is secured and maintained by the use of highest grade flours and other pure food materials with the addition of the WARD process which is the most scientific known to the bread-making industry.

Cleanliness is assured because TIP-TOP is made in a model bakery—a veritable snow-white temple of baking cleanliness—and every loaf is wrapped in waxed paper by machine.



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ORIGINATORS OF EVAPORATED MILK

RUMFORD

The Wholesome

Baking Powder

A scientific preparation being the result of extended research by the celebrated chemist Prof. E. N. Horsford, for many years Prof. of Chemistry in Harvard University.

Dietetically speaking, Rumford is without fault; as a leavening agent it is perfect; as a keeper it has no superior.

DOES NOT CONTAIN ALUM

Its Purity is Unsurpassed.

icines were free from adulterants and were properly labeled.

Fifteen samples of food stuffs, such as buttermilk, candy, whisky and bread were examined for poison. In but one case, a sample of whisky which was adulterated with strychnine, was a poison found.

Sixty-three prosecutions were filed during the year for violation of the pure food and sanitary food laws. In every case a conviction was obtained. Twenty-five of the cases involved the sale of meats containing starch and sulphites. Five dealers were prosecuted for exposing candies. One baker plead guilty to exposing cakes. Three dairymen were fined for selling dirty milk, two for milk containing added water, one for milk below standard in fat and three for handling milk under unsanitary conditions. Two dealers were fined for selling cold storage eggs as fresh. Three grocers plead guilty to selling illegal ciders and one dealer paid a fine for having in his possession jam containing benzoate of soda.

The department files but few cases for violation of the laws, believing that the police court is the last place in which to conduct a pure food or sanitary campaign. The uniform success which attends its appearance in the courts is gratifying, for it establishes the fact that judges are in sympathy with the principles which promoted the legislation.

In the enforcement of the sanitary food law, the food inspectors visited 422 cities and towns having a total population of one and one-half millions. In many cases but one inspection visit was made during the year. This was particularly true of the small towns. A reasonable enforcement of the sanitary food law would not be secured by such infrequent visits if it were not for the fact that every local health officer is a deputy food inspector.

Nine thousand four hundred and one establishments were visited during the year, including dairies, groceries, meat markets, bakeshops, hotels and restaurants, ice cream factories, saloons and other manufacturing and distributing establishments handling food. But 62 places were reported as excellent, 4,689 were rated as good, 4183 as fair, 357 as poor and 110 as bad. Sixty of the 110 bad places were dairies, 378 of which were visited by the inspectors. As has always been the case, the inspectors found the dairies to be less sanitary than any other class of places visited. But 76 dairies were rated good, 173 were fair only, and 69 were poor.

Six hundred and twenty-six of the 1,159 meat markets were rated good, 497 were fair, 27 poor and 4 bad. One thousand eight hundred and fifteen of the 3,446 grocery stores were rated good, but 7 were condemned as bad. Of the 152 saloons visited none were rated excellent, 17 were in good condition, 105 were fair only, 23 were poor and 7 bad. The sanitary conditions of saloons is unsatisfactory. During the coming year food inspectors will give special attention to this class of establishments, and saloon keepers, like butchers, bakers and restaurant proprietors will either clean up or shut up.

A comparison of the sanitary conditions of the several classes of establishments visited with the results obtained during the years from 1907 to 1915 inclusive, show a slight but definite improvement. This fact is the more gratifying because the inspectors are each year insisting upon a more stringent observance of every detail of the sanitary food law.

An important feature of the sanitary food law is the provision which gives the State Food Commissioner authority to condemn unsanitary places and to close such places pending their improvements. Under this section of the law 637 establishments were condemned during the year. In 606 cases the condemnation notice was issued because of unsanitary conditions at the plant. The inspectors also observed that in 497 of these places the floors, equipment or building itself were improperly constructed.

Dairy products have been severely criticized because of the fact that they are produced too frequently by men who are not sanitarily up-to-date and who do not appreciate as they should their duty to the public. For the purpose of determining the condition of Indiana dairy products, during 1916 Inspector A. W. Bruner completed a critical study of every dairy products plant in the State. One hundred and thirty-two creameries were inspected. These plants produced in 1915 32,266,782 pounds of butter, of which 98.2 per cent

was churned from pasteurized cream. Fourteen plants did not pasteurize but since the inspection have installed an equipment for that purpose. Two hundred and thirty-five ice cream plants making in 1916 4,112,332 gallons of ice cream were visited by Inspector Bruner. Ninety-two per cent of their product was made from a pasteurized mix. The only places not pasteurizing were small confectioners and druggists. Since the inspection these plants have either installed equipment for pasteurizing, are purchasing pasteurized stock or are buying their ice cream instead of making it.

One hundred and fourteen milk depots sold during the year 14,027,773 gallons of milk of which 96.1 per cent was pasteurized. Fifteen small plants did not pasteurize.

In view of the fact that Indiana has as yet no compulsory pasteurization law, this report is most creditable and can only be interpreted as an evidence of progressive business methods on the part of the large milk dealers.

The investigation showed the fact that the milk and cream supply is gathered from about 70,000 farms. The general average is but 3.5 cows per farm. Although Indiana is a large producer of dairy products there are as yet but few dairy farms and the bulk of dairy products are produced as a side line to general farming.

Attorney General Stotsenburg has given Commissioner of Weights and Measures Barnard an opinion to the effect that the Weights and Measures Law which prohibits the sale of potatoes and other commodities in any manner except by standard weight or measure, shall be construed to mean that when potatoes are sold by measure the measure must contain the weight or fractional weight of a legal bushel. Inspectors of weights and measures have been instructed that a peck of potatoes weighs fifteen pounds, and ordered to prosecute dealers who do not deliver that amount.

The weights and measures department has recently added to its equipment a "Trailer" in which a thousand pounds of heavy test weights and equipment for testing large scales can be hauled to towns and counties which have no inspector of weights and measures. Forty-one farmer's and elevator large scales tested in one week showed 11 inaccurate scales. In most cases the scales were out of order and were readjusted. In a number of cases they weighed one hundred pounds short on the ton. Such scales were condemned and will be replaced by accurate instruments.

Kansas.

No modern romanticist or movie dramatist could devise a more thrilling set of experiences and hairbreadth escapes for his heroine than has poor little Mary Jane undergone in her history at the hands of various court decisions and rulings of food officials. In spite of which fact, Mary Jane continues to subsist as well as any healthy orphan could be expected to do under the circumstances. Another chapter has been added by the Kansas Supreme Court in a recent decision denying the Corn Products Refining Company an injunction to restrain the Kansas State Board of Health from seeking by legal means to prevent the sale of Mary Jane without the addition of her patronymic of "Compound."

The syllabus of this decision is a fine distinction between the words "prepared from" and "composed of" and the direct result would seem to be an increased tax on the ingenuity of the manufacturers to devise new labels, and an additional item of cost of lithographing and printing bills. On one point however, the Court continues to maintain, as in previous decisions, that the Kansas State Board of Health is not exceeding its authority in laying down rules and regulations governing the sale of food products in that state.

The opinion of the Court is herewith given.

NO. 20,280.

Corn Products Refining Co., Appellee,

vs.

V. C. Eddy, et al., Appellants.

Appeal from Shawnee County, Second Division.

REVERSED.

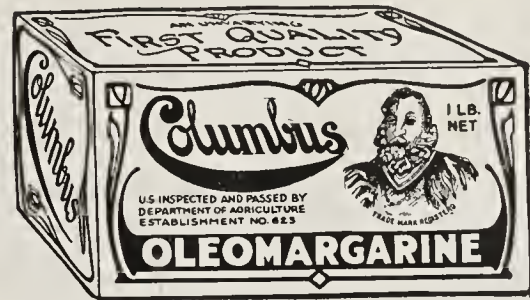
Syllabus.

By the Court.

Marshall, J.

An injunction will not lie to restrain the State Board of Health from seeking to prevent, by legal means, the sale of a compound table syrup, under the name "Mary Jane,"

The Purest, Cleanest Product Ever Churned for Human Food



Every pound churned under triple inspection—U. S. Agricultural Department, U. S. Internal Revenue Department and the Ohio Pure Food Department.

Lowers the Butter Bill without the sacrifice of quality.

Famous throughout thirty states as a Pure, Wholesome Delicious Spread for Daily Bread.

If your dealer does not handle "COLUMBUS" write us direct.

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The Towle Maple Products Co.

Refineries and Main Offices
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where the label does not show the place of manufacture or production, and where it is not plainly stated on the package in which the syrup is offered for sale that it is a compound.

All the Justices concurring except Dawson, J., who did not sit.

A true copy.

Attest:

(Seal.)

D. A. VALENTINE,

Clerk Supreme Court.

The Kansas State Board of Health has rescinded its action of 1909 regarding the presence of alum in pickles. Producers will be governed by the Federal ruling on this point.

The Samuel B. Lux Mercantile Company of Topeka, Kansas, has completed and is now occupying a new building, 75 by 150 feet, distinguished by many new features. It contains separate, all white enameled, storage rooms for varieties of fruits and vegetables, and completely equipped with automatic heating and refrigerating systems for maintaining equable temperatures throughout the year. Offices occupy the front of the first floor. Particular features are large front and rear loading docks, and a side room 25 by 150 feet with platform and turn table and switches for automobile vans. Perhaps the most complete and up-to-date commission house in the middle west.

Pennsylvania.

Organization of the farmers of the State for the marketing of their products and protests from the State dairy and food division chief against drawing heavily upon Pennsylvania's stored foodstuffs for export have taken the place of the biennial discussion of cold storage regulation in this State. Ordinarily, when a legislative session is a little more than a month away there is much talk about proposed changes of cold storage statutes. Now, those who have been busy crusading are more concerned about keeping a supply inside of the country than of how it is to be kept. The steady decline of food in storage shown by the quarterly reports has been a matter of much study by the State officials who have been in consultation with cold storage men and commission merchants. The significance of the withdrawals is shown by a statement by Commissioner James Foust to the effect that there are less than nine eggs for each person in Pennsylvania now in storage.

Organization of farmers into community associations to obtain better prices was undertaken by the Department of Agriculture last spring and several dozen associations have been formed whereby the Pennsylvania farmer, who used to sell to anyone who came along, has been awakened to the value of grading, the importance of carload lots and the advantages of proper routing. The State has been furnishing price lists at the principal markets to these farmers' organizations and its lecturers have been giving advice on grading, while the railroads were quick to gather in the pooled produce and to give car service and routing that cinched business.

However, there is a considerable quantity of produce being held back on Pennsylvania farms, notably in the Lancaster region. An immense quantity of wheat is still in hands of farmers and there has been holding back on potatoes and other produce. The State's wheat crop was less than last year's, but it brought an estimated \$41,000,000 to the farmers of the State and the acreage sown this fall is believed to be close to four per cent greater than a year ago.

Figures compiled at the Department of Agriculture on the State potato crop show that it will run close to 19,750,000 bushels, three-quarters of a million less than in 1915,* and away behind the record crop of 28,408,000 bushels in 1914. Lehigh County took the honors from the York-Lancaster region, producing 1,142,000 bushels, while rural Philadelphia, where intensive agriculture prevails, had an average of 125 bushels to an acre. The banner production is reported of W. A. Shuey, a New Cumberland farmer, who got nearly 6,000 bushels from a 22-acre farm, formerly used for fruit raising.

Several inquiries have been made at the Capitol by persons who desire to know the policy of the State administration on

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food law changes, but there is a disposition to await the action of the trade. In the test case of the act of 1913 the Dauphin County court practically demanded that the questions of constitutionality be raised in a criminal prosecution instead of in equity proceedings so that the act lacks a test as a whole, although an Allegheny County decision on the duration of storage has recently been appealed.

The Workmen's Compensation Law, which affects all canneries, hotels, packing houses and similar establishments, but not agriculture, is to be preserved as it stands today for at least two years' further test by the State administration. There is a possibility of the system being extended to farming and domestic service, but it is more or less remote. Efforts to make the compensation system compulsory instead of optional, to increase compensation from 50 to 66 per cent of wages, to reduce the fourteen week period of disability before payment and for more payment for medical or surgical care are to be launched by organized labor.

Another legislative fight is threatened over the plan to establish dairy inspection under supervision of the State Live Stock Sanitary Board, the Department of Health being given cooperative powers in case of outbreaks. Dairy interests are demanding that the law shall not be hard and fast and that the inspection be made by veterinarians instead of political henchmen. There are over 210,000 farms in the State of which a large part maintain cows so that the inspection system will require expenditure of money quite beyond expectations. However, because of some outbreaks of typhoid fever there has grown up a demand for dairy inspection, creamery supervision and control of ice cream manufacturing plants which will be heeded on Capitol Hill.

The State's ice cream standard law is now before the United States supreme court on a test case which originated in Erie County and which will affect an immense amount of business.

State licensing for sales of oleomargarine will break all records this year. About 3,200 licenses will probably be issued by Commissioner James Foust and the revenue will run close to \$300,000 in his division. Last year the commissioner turned in \$279,000 representing all sources of income. The 1916

revenue is now several times the annual appropriation to run the division and far and away beyond what it was when Mr. Foust took charge in 1907.

In all probability the next legislature will be urged to reduce the oleomargarine license schedule of prices. The advance in butter prices will probably lead to more sympathy with such a bill than has been manifested in the last half dozen sessions. The State Grangers will meet here next month to plan their campaign against the proposed change of the law.

Pennsylvania is now taking account of its apple crop and estimates that it will go over 15,000,000 bushels are made. The prices received have been very satisfactory and a big demand has grown up for export. Pennsylvania canneries have been working overtime in filling demands for foreign shipments. In southern counties old plants have been reopened.

Commissioner Foust says that only 44 of the 72 cold storage plants in the state operating under license reported any eggs on October 1 and the number has been much reduced in the last six weeks. December 1 will likely see fewer eggs in storage in this State than known for years on that date, withdrawals for export having been heavy. The commissioner has given orders that eggs stored in April must come out in December and that they may not be held a day beyond the legal limit. He has strongly urged a limitation to food exports.

Prices for poultry on Pennsylvania farms run higher this fall than ever known before and turkeys which are ordinarily available in summer have been held back for prices which are denounced as scandalous. In some sections of the State where turkeys are a specialty farmers refused to sell to commission men until after meetings were held and prices discussed. Figures on poultry prices gathered by the statistical end of the Department of Agriculture show 40 and 50 per cent advance in prices of poultry on the farm in two years.

Prosecutions brought by the agents of the State Dairy and Food Commissioner lately have mainly been for violation of



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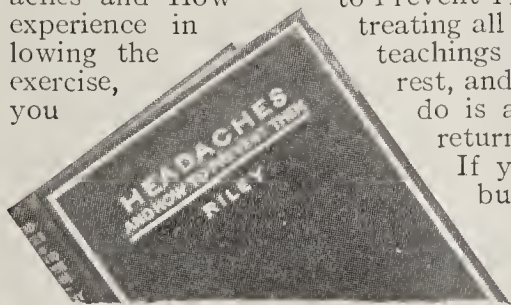
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What is more exhausting than headache? Yes—a headache is "only a symptom." It is in the conditions back of headaches—the conditions by which headaches are caused—that the real danger lies. High blood pressure, auto-intoxication, eye-strain and worse disorders cause headaches. To be rid of headaches, you must get at their cause. How to do this is explained in a new book, "Headaches and How to Prevent Them"—by Dr. W. H. Riley, a Neurologist who has had years of experience in treating all kinds of cases involving headaches. You may get relief by following the teachings of Dr. Riley's book. No drugs. Only natural means—diet, rest, and sleep. We send this book for your FREE examination. All you do is ask for it. (See the coupon.) If not satisfied with the book, return it at our expense. Your examination costs you not a penny. If you keep the book, you remit only \$1.25. Not a large book, but—worth its weight in gold to the headache sufferer.



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Never surpassed in wholesomeness, leavening or keeping
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Soluble, Concentrated, Terpeneless

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SPIELMANN BROS. CO.

MANUFACTURERS OF

**CIDERS, VINEGARS &
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**POMPEIAN
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ALWAYS FRESH
PURE - SWEET - WHOLESOME

egg laws and the sale of cold storage eggs as fresh, while wholesale raids have been made upon shops which have been selling articles of food which cannot pass muster. So-called "bargains" in foods have been investigated and the reason for low prices has been enough to cause arrest, especially in Philadelphia. However, it may be said that there have been fewer suits than would be expected because of the food situation, and there is more misbranding in cattle feeds now than in what is sold in the general markets of this State.

South Dakota.

One of the features of South Dakota legislation which is being widely discussed at the present is the manner of prohibitory act which the coming legislative session will enact. The prohibitory amendment to the constitution which has been adopted by a vote of 64,867, to 53,092, is rather radical, so much so that retail dealers fear that it will affect their trade in essences, extracts, and many other classes of goods carried by retail grocers. The text of the amendment as it has been adopted is:

"No person, firm, club, association, or corporation within this state, shall, on or after the first day of July, 1917, make, brew, distil, or manufacture or aid in making, brewing, distilling or manufacturing for sale, barter, trade, gift or beverage purposes, any spirituous, malt, brewed, fermented or other intoxicating liquors, or any mixtures or compounds which in part consist of intoxicating liquors, except as hereinafter provided.

"No person, firm, club, association, or corporation, within this state, shall, on or after the first day of July, 1917, import or aid in importing into this state for sale, barter, trade, or gift, nor sell or aid in selling, nor offer for sale, barter, or trade, nor give away or furnish or aid in giving away or furnishing, nor keep for sale, barter, trade or gift, any spirituous, vinous, malt, brewed, or fermented or other intoxicating liquor or mixture or compound which in part consists of intoxicating liquors, except as hereinafter provided.

"Provided; that nothing in this article contained shall be construed to prohibit compounding, importation, sale or keeping for sale any spirituous or vinous liquors in this state for medicinal, mechanical, sacramental or scientific purposes by regularly registered pharmacists, under such regulations and restrictions as the legislature may prescribe."

This is declared by many to be a prohibition against any but registered pharmacists handling any food preparation containing alcohol, and a strong campaign was made against the amendment upon that ground, local dealers opposing it on the plea that it would take away from them a valuable trade, and put into the hands of druggists alone the right to sell any of the household remedies, essences and extracts which are carried by many retail grocery dealers.

There is considerable complaint in this state in regard to butter packages put out by some of the creameries. They are put up in what are presumed by the purchaser to be pound packages, but in test cases have been found to contain but twelve ounces. The matter of control of this is in the hands of the state pure food commissioner who is commissioner of food and drugs, and has the power to compel dealers in any food product to mark upon the package or container the net weight of the product contained, but cannot compel the manufacturer to put any given quantity into a package or container. The point involved is as to whether or not a package of butter enclosed at the creamery in a printed paper wrapper is in a container. The enforcement of the present existing statute depends upon the legal interpretation of this point.

The present high price of meat products in the western range country is practically one of demand for beef cattle, larger than the supply just at present. The method of handling the western ranger, after they had been largely homesteaded materially reduced the number of beef cattle in that section, but the last few years have seen a heavy increase in the herds, but mostly young stock which will not be ready for the market, except as "baby beef," until next year. This with the eastern demand is putting the price of beef cattle in

this section of the range country at the highest level for years, and the same situation is likely to prevail for several years, with a possible drop in prices if the heavy European demand should drop off by the sudden end of hostilities. But cattle raisers are not expecting an early drop in prices even though there should be an end to foreign demand, on account of the shortage of stock to fill the home requirements.

Tennessee.

Eggs held in storage shall be kept at a temperature of 29 to 30 degrees Fahrenheit, and when so kept for longer than thirty days shall be sold only as storage eggs.

In the wholesale trade, the month in which eggs went into storage must be stated in offering for sale.

In the retail trade, storage eggs, as outlined above if held for sale, exposed for sale or sold, container must be labeled or placarded in such a manner that easily denotes that such eggs are of storage variety. All storage eggs in either wholesale or retail trade must be sweet.

(Signed)

HARRY L. ESKEW,
Commissioner.

H. L. Goldner, 806 14th avenue South, Nashville, Tenn., was arrested for violation of the Sanitary Food Law, for transporting meat not properly protected from dust, dirt, flies and other injurious contamination, was found guilty and fined \$10 and costs.

E. S. Ellis, Lebanon, Tenn., was arrested for violation of the Sanitary Food Law and was found guilty and fined \$25 and costs, it being his second offense.

H. V. Campbell, Lebanon, Tenn., was arrested for violation of the Sanitary Food Law, and was found guilty and fined \$10 and costs.

W. E. Boushee, 902 South 4th street, Memphis, Tenn., was arrested for violation of the Sanitary Food Law and was found guilty and fined \$25 and costs.

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31 N. State Street

CHICAGO, ILL.

DEPARTMENTS: Food, Commercial, Medical, Milling and Baking.
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39-41 West 38th Street, New York City

Sanitary, Chemical and Bacteriological Investigations. Examinations of Foods, Drugs, Water and Disinfectants.

"GOOD-BYE FLY"

According to Department of Agriculture Bulletin No. 118: Apply 0.62 pounds Borax to every 10 cubic feet of manure. Apply Borax particularly around edges; sprinkle with 2 or 3 gallons of water. This treatment should be repeated with each addition of fresh manure. Flies lay their eggs in fresh manure. Borax prevents their hatching.

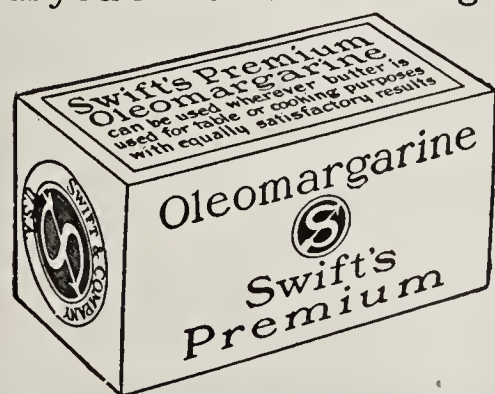
Don't use more Borax than recommended above.

Premium

Do you sell Swift's Premium Oleomargarine? You are overlooking a money maker if you are not. Swift's Premium Oleomargarine once used by your customers will repeat for it is a quality product. Push Swift's Premium Oleomargarine. Talk it to your trade.

Get it introduced into the homes of your customers. We have many advertising helps which we will be glad to furnish to you, free. Ask for these and use them. You can have a big Premium Oleomargarine business that will show you a good substantial profit.

If you have no Oleomargarine license, it will pay you to secure one. The profit on two 30 lb. cases will nearly pay for the license. Ask our salesman for particulars.



Miss
Premium

Swift & Company

K C

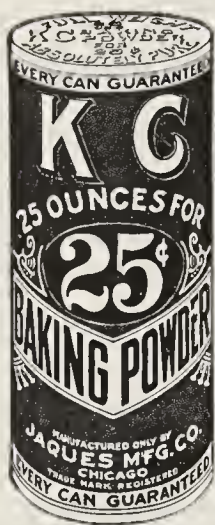
Baking Powder

CONTAINS NO ALBUMEN (sometimes called white of egg) OR ANY ADULTERATION

Therefore

It Complies With All PURE FOOD LAWS, both State and National.

Sold and pushed by grocers throughout the United States who appreciate fair dealing by the Manufacturers and who like to give their customers full value for their money.



JACQUES MFG. CO. :: CHICAGO

BUY PURE COMPRESSED YEAST

The discussion about using starch in Compressed Yeast has reached the point in the United States of a decision forcing those who used it to declare the fact on the wrapper or label.

That is how we administer the Food Laws in this country.

In Austria where they do things more thoroughly, the chemists of the Royal Experiment Station of Vienna investigated the question for some years and finally reported against the use of Starch in Compressed Yeast for the reason that when mixed with Yeast "STARCH IS LIABLE DURING A CERTAIN STAGE OF THE DETERIORATION TO HIDE PUTREFACTION OF THE YEAST AND THEREBY FAVORS THE MARKETING OF PRODUCTS UNWHOLESOME AND DANGEROUS TO THE PUBLIC HEALTH."

Thereupon the Austrian Government promptly passed a law prohibiting altogether the use of starch in Yeast.

We Do Not Use Starch in Yeast

A. P. CALLAHAN & COMPANY

2407 La Salle Street

Telephone Calumet 410

CHICAGO, ILLINOIS

NO PRO-RATING HERE

Two important and interesting letters sent on November 1st, 1916, by the T. A. Snider Preserve Co. of Chicago:

Their Letter
to the
Wholesale
Grocers



Jefferson Livingston, Sole Owner
THE T. A. SNIDER PRESERVE CO.
168 N. Michigan Ave., Chicago, U. S. A.

To the Wholesale Grocers of the United States and Canada
One Hundred Per Cent to be Delivered on all Snider Orders

November 1st, 1916.

Our sales have been enormously heavy past thirty days. We still have five hundred and twelve cars to ship on our fall orders. We have been running night and day since August 4th.

The unusual amount of late orders we have received unquestionably have been diverted to us from some of our competitors on account of many of them delivering short on their future orders.

We have considerable surplus stock for sale after we have filled all of our future orders. Prices and terms on our surplus stock will be made public within the next thirty days.

Until we have shipped our prompt shipping orders, we will not accept any more orders from wholesalers.

We have a tabulated list showing amount of goods sold to you; also amount of the orders sold to the retail grocers thru you. We respectfully request you to PROPERLY fill 100% on all our orders from retail grocers that we have turned over to you. Please see that you do not sell against your purchases so that you will not be able to fill 100% on the retail orders we have sold thru you.

We trust you will realize the importance of filling your retail orders in the manner described in the previous paragraph. You understand it is your obligation to the retailer--not ours. Our obligation is to fill your order complete and your obligation is to completely fill your orders that we have turned in to you for the retail grocers.

Yours very truly,

THE T. A. SNIDER PRESERVE COMPANY.

Chicago, U. S. A.
November 1, 1916.

Gentlemen: We sent you day letter yesterday as follows, which we now confirm:

"Our sales have been enormously heavy past thirty days. We still have five hundred and twelve cars to ship on rush fall orders. Until we can catch up on prompt shipping orders we will not accept any more orders from wholesalers or retailers direct. Have your salesmen sell against wholesalers' previous purchases only."

We are going to leave it to your business intelligence to see that ALL wholesale grocers deliver 100% on all the free deals on Snider's Catsup and Soup that you have sold them. We will deliver one hundred per cent to the wholesalers on their orders.

Some wholesalers will undoubtedly deliver short on the orders carrying free catsup and free soup unless you properly check them. The only danger point for you to watch is that the wholesaler does not sell against his stock so that he will be unable to fill his retail orders 100% that you have turned in to him.

Post your men correctly and in detail on the points mentioned above.

Yours very truly,

THE T. A. SNIDER PRESERVE COMPANY.

Their Letter
to Their
Salesmen



"That's the Flour to use ~ Always"



PURE FOOD LABORATORIES

IT'S MATURED
THE BEST FLOUR
BLEACHED
UNDER U.S. PAT. 1,271,977

It not only makes better bread but scientific tests show its more wholesome than fresh flour

THE PERFECT FLOUR MATURING SYSTEM

*Industrial Appliance Co.
140 W. Van Buren St. Chicago.*



ATLAS FLAVORS

"Best by Test"

Atlas Genuine Fruit Strawberry Is Unexcelled.
A Trial Order Will Convince You.

Manufactured by

H. KOHNSTAMM & CO.

(First Producers of Certified Colors)

NEW YORK OFFICE
83-91 Park Place

26-28 N. Franklin St., Chicago, Ill.

*"The Atlas Label
Protects You."*

Famous Recipes from the Corn Products Cook Book



Brown Bread

- | | |
|--------------------------|-------------------------|
| 2½ Cups yellow corn meal | 1½ Heaping teaspoons of |
| ½ Cup Kingsford's Corn | soda |
| Starch. | 1 Teaspoon salt |
| ½ Cup flour | 1 Cup Karo |
| ½ Cup rye flour | 3½ cups sour milk |

Sift the dry ingredients together till thoroughly mixed. Add the Karo and stir in sour milk. Mix well and steam for four hours.

THE majority of American housewives are thoughtful and far-seeing—always planning ahead surprises and variety in the food they serve the family. Call it preparedness if you like—you will find that every member of the household is strong for that form of preparedness.

And in every such home there is always an abundant supply of Karo—the famous syrup for every purpose. For the housewife who likes originality and variety in her daily menu knows what a valuable aid Karo is in cooking — particularly in making wholesome bread and cakes — delicious desserts and candies.

Our Cook Book contains many choice and proven recipes, such as you will use over and over again. Send for your copy today. It is free upon request.

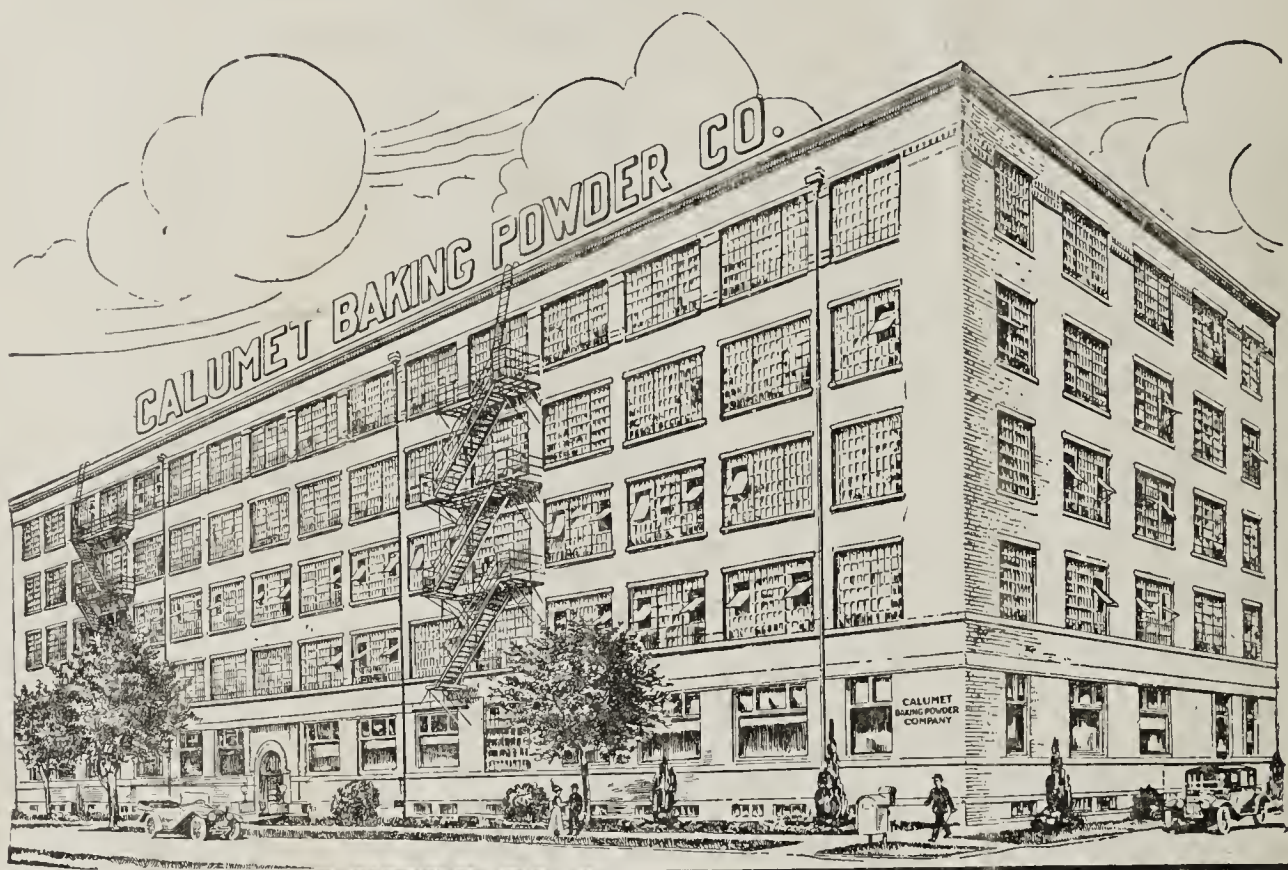
CORN PRODUCTS REFINING CO.

Dept. S. W.

New York

P. O. Box 161





The largest, finest, most sanitary Baking Powder plant in the world

Mere size is not a conclusive argument in favor of anything. But when an institution has reached a position of leadership by a steady growth over many years and includes in this success the confidence of millions of people, size means something.



Food commissioners and members of the medical profession are cordially invited to visit this plant and inspect every detail in the process of manufacture. They can recommend the product with assurance.

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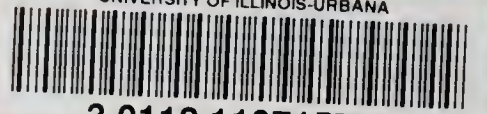
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